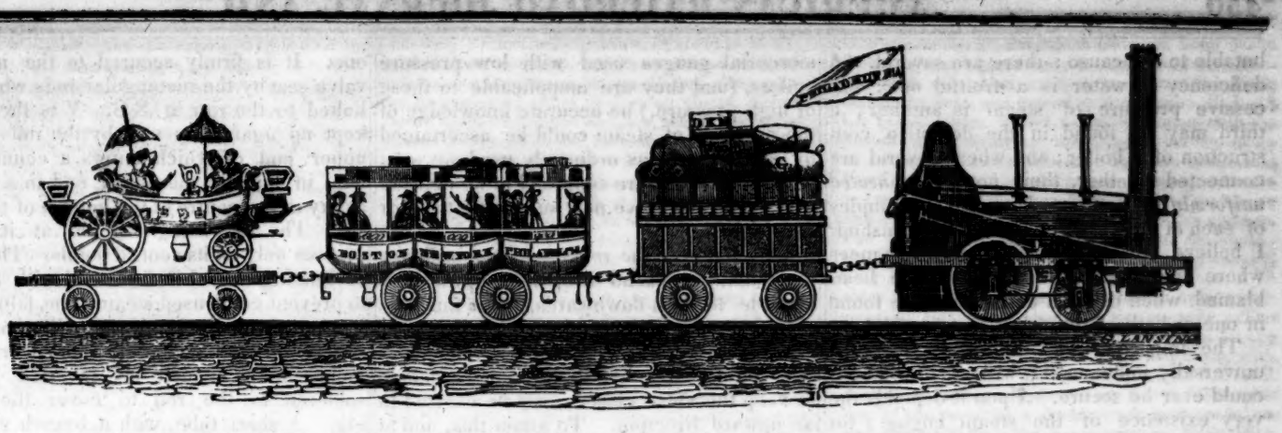

AMERICAN RAILROAD JOURNAL,
AND ADVOCATE OF INTERNAL IMPROVEMENTS.

PUBLISHED WEEKLY, AT No. 35 WALL STREET, NEW-YORK, AT THREE DOLLARS PER ANNUM, PAYABLE IN ADVANCE.

D. K. MINOR, Editor.] SATURDAY, JULY 26, 1834. [VOLUME III.—No. 29.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, JULY 26, 1834.

We continue in this number the list of Railroads, and shall in the next complete it, as far as we at present have the means, together with a list of Canals.

NEW-YORK AND ERIE RAILROAD.—We understand that the surveys of this road are progressing rapidly, and that the route is found to be more favorable than was anticipated. It is greatly to be desired that this important work should be commenced at an early day. This city, as well as the great West, is particularly interested in its accomplishment.

IMPROVEMENTS IN VIRGINIA.

Petersburg, July 13, 1834.

To the Editor of the Railroad Journal.

SIR,—In your Journal, of 5th inst., I observe an article under the signature of H. N. C., in which it is mentioned that, "there are two works in Virginia of the most useful and important character, but which will not be undertaken for some time yet to come, on account of the want of energy, or interest, of the citizens of that section of the country in their completion. They are railroads, one from Crk. Landing to Fredericksburg, (a little over 10 miles,) and the other from Fredericksburg to Richmond, (about 60 miles.)" As I agree with you that Virginia has done too little towards the improvement of her natural advantages, I am unwilling she should be deprived of any credit to which her exertions may entitle her, and therefore beg leave to inform your correspondent, through the medium of your columns, that a party of engineers, under the direction of Moncure Robinson, Esq., are now engaged in the location of the railroad from Richmond to Fredericksburg, a portion of which will be put under contract during the present year, and there is every prospect that the work will be completed as speedily as possible.

A VIRGINIAN.

PROGRESS OF STEAM NAVIGATION WITH INDIA.—A steam voyage from India to England, by the Red Sea, seems at last to be really on the eve of taking place. The steamer Forbes has been engaged to start from Calcutta for Suez in the beginning of the present month, the Hugh Lindsay having been pronounced unfit for the purpose. The whole expense, except that of the coals, is to be borne by the Indian Government; while the Calcutta Steam Navigation Committee, will receive all the profits on passengers and all kinds of freight, except letters, the postage of which will be reserved by the Government.—[Mechanics' Magazine.]

A speed of forty miles an hour, with a light load, has been obtained upon the Manchester railway; and Mr. G. Stephenson, the engineer, has stated his opinion than an engine might be constructed to run 100 miles within the hour, although he acknowledges that "at that rapidity of motion the resistance of the atmosphere would be very considerable." Engines are now made with eight times the power of the Rocket, yet with little more weight resting on each rail, the load being equally divided upon six wheels, and the machinery placed in a more advantageous situation than formerly. The tubes of the boiler are made smaller, and more numerous, and of brass instead of copper. The last engine put on the railway ran 23,000 miles with the most trivial repairs, making every day four or five journeys of 30 miles each.—[English paper.]

NEW INVENTION.—A blacksmith in Virginia has invented a machine for striking, which enables blacksmiths to dispense with a striker, and at the same time perform, with the aid of one of these machines, double the amount of work which they can with the aid of one of the best strikers. The machine is propelled by the foot in the ordinary manner of turning a lathe. The inventor has secured a patent right.

DIFFUSION OF KNOWLEDGE.—A royal Sardinian edict was promulgated, so lately as 1825, which forbade every person from learning to read or write, who could not prove the possession of property above the value of fifteen hundred livres. To become a student, the possession of an income of the same sum is necessary.

PINE APPLE CLOTH.—A beautiful specimen of fine cloth, made from the fibres of the leaves of the pine apple, from Manilla, resembling the finest linen cambric, was presented by Miss Eliza Schroeder, at the late Horticultural Exhibition in Baltimore.

We copy the following from the forthcoming number of the Mechanics' Magazine,—as also the article at page 454, on the "Art of Brewing."

T. Ewbank's Hydrostatic Safety Valve and Gauge, for Steam Boilers. [Communicated by the Inventor.]

SIR,—In accordance with your request, I forward a brief description of the Hydrostatic Safety Valve, premising that a more perfect account of it may be seen in the "Journal of the Franklin Institute" for January and July of last year, (vols. 9 and 10.)

There appears to be a prevailing though erroneous opinion, that steam boilers are seldom, if ever, exploded by an excessive pressure of steam. Numerous persons suppose these disasters to be *invariably* owing to a deficiency of water within them at the time; hence they consider all improvements in the safety valve, or the application of other devices for a similar purpose, as having a tendency to increase the risk of explosion, by promoting negligence in the attendants. It is sufficient to observe, in answer to reasoning of this description, that it is equally calculated to prevent all improvements whatever in the steam engine. Had such arguments been listened to 120 years ago, this noble prime mover of the arts might still have been confined to its original purpose of raising water; and each one attended by a person, upon whose attention in alternately opening and closing the valves, the continuance of its motion depended. Such objections were particularly calculated to prevent the introduction of the important improvement of Potter, who, it is said, had a disposition to skulk, or "*scog*," (as it was there termed,) which led him to devise a simple contrivance, which changed the whole character of the steam engine—for by it the engine no longer depended upon an attendant for the continuance of its motion, but became in a manner self-acting, and with a regularity infinitely superior to its previous movements. His device he called a "scogger."

Explosions of steam boilers are not attri-

butable to *one* cause: there are several. A deficiency of water is a fruitful one; excessive pressure of steam is another; a third may be found in the defective construction of a boiler; and where several are connected together, their not being *heated uniformly* is another. Numerous examples of each of these might readily be furnished. I believe there are not wanting instances where the attending engineers have been blamed, when the real cause was to be found in one or both of those last mentioned.

The importance of the safety valve is universally understood; without it no boiler could ever be secure. Upon it depends the very existence of the steam engine; for without the safety valve, as Mr. Galloway justly observes, "steam would, long ere this, have been abandoned as a most dangerous and ungovernable agent." Every person can readily perceive, that however strong a boiler may be, if the force within it be not limited it must be rent asunder; hence the design of safety valves, which are intended to open, and discharge the excess of vapor, whenever its elastic force exceeds the prescribed limits. In the case of a steamboat, the lives of the passengers and safety of the boat depend in a great measure upon the right construction and proper use of this part of the steam engine.

One of its most essential attributes consists in its being properly loaded; and a provision to prevent this load from being increased. By the arrangement of the ordinary valve, it is difficult, if not impossible, to accomplish this; the load *may* be increased indefinitely, either by augmenting the weight directly on the lever, or by moving it further from the fulcrum: how frequently and fatally this has been done, may be abundantly seen in the history of explosions. There are also other defects in the ordinary valve, though less obvious to common observers, such as the indirect mode of obtaining the pressure upon it, through the intervention of the lever and its joints, by which the centre of pressure, instead of being directly on the centre of the valve, becomes more or less on one side, which prevents it from being raised perpendicularly, and causes it to adhere to its seat. The friction of the stuffing-box, through which the valve rod passes, and also that of the joints, both of it and the lever, which from rust, &c. is often considerable. These and other defects are so great, that were it not for the mercurial gauges used with low pressure boilers, (and they are inapplicable to those of high pressure,) no accurate knowledge of the pressure of steam could be ascertained by safety valves as ordinarily used.

These defects are supposed to be entirely avoided in the valve now submitted to your examination.

Its position is the reverse of the ordinary one; that is, instead of opening upwards, it is made to open downwards. For this purpose it is raised above the boiler, and connected to it by a pipe. By this arrangement you will perceive that the pressure requisite to keep the valve closed must be exerted in an upward direction. To attain this, and at the same time *limit* the pressure, a simple device is adopted, which will be understood by supposing an empty vessel (a bucket, for example,) placed with its bottom down, into water, or any other fluid; if depressed in that position, the power required to do so will be in proportion to the area of its bottom and the depth of its immersion; but if forced down till its upper edge becomes level with the surface of the fluid, the power required to keep it there, or in other words, the force which the vessel exerts in a contrary direction, will then be at its maximum; for if further depressed, the fluid would run into and sink it, and destroy its buoyancy altogether.

Suppose the vessel containing the water, which is rather larger in diameter, but of less depth, than the bucket, (that the fluid may never be permitted to run into the latter,) be placed immediately under the safety valve, and firmly secured to that part of it containing the seat of the valve. Let the bucket be placed in it in the position as before; and a rod, extending from the centre of its bottom to the centre of the valve; then, if the outer vessel be filled with water, the force tending to raise the bucket against the valve, by means of the rod, will be as before mentioned, at its maximum; nor can it be increased: consequently, the elastic force of the steam in the boiler can never rise higher than what is equivalent to overcome this pressure.

The length of the rod is such as to admit a space of two or more inches between the bottoms of the two vessels, in order to allow the valve to open that distance.

The foregoing is a brief description of the *principle* adopted in this valve; and which may be more clearly understood by the annexed cuts:

Fig. 2.

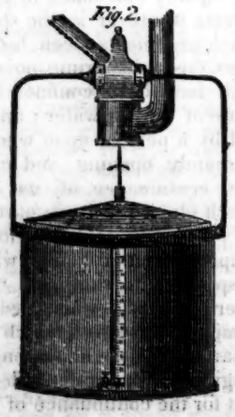

Fig. 1.

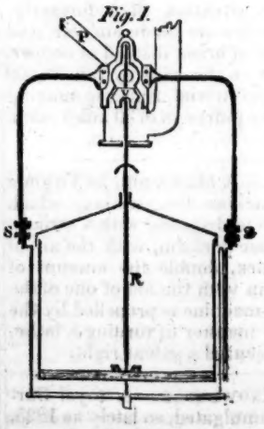

Fig. 1 represents this valve in section with the vessels by which the hydrostatic pressure is made. The outer one is enlarged at the top by a rim, from which a pipe descends, which prevents any surplus fluid from flowing over it or entering the inner one. It is firmly secured to the inverted valve seat by the rectangular rods which are bolted to the rim at S S. V is the valve, kept up against its seat by the rod R, the upper end of which enters a countersunk hole in it; and the lower end in a similar cavity in the centre of the bottom of the vessel. The rod being tapered at its ends, presses only on its central points. The inner or floating vessel is furnished with a cover, to prevent condensed steam from falling into it when the valve is opened. The rod passes through the centre of this cover, a few inches above which an inverted cup is soldered to the rod to cover the opening. A short tube, with a branch attached to it, is connected to the under part of the valve seat, to take off the waste steam when blowing off. The communication between the valve and the steam in the boiler is by means of the pipe P, which may either be connected to the boiler or the steam pipe. To prevent any friction arising from the inner or floating vessel touching the sides of the other, a short rod is attached to the centre of its bottom on the under side, which enters a corresponding cavity drilled into the bottom of the other.

This apparatus, unlike the ordinary safety valve, combines in itself both the valve and gauge, with its tell-tale; and this gauge is applicable to steam of *every degree of elastic force.*

Fig. 2. is an exterior view, and which also shows the gauge; which is a glass tube connected to the cock at the bottom of the outer vessel, and communicating with the water in it. It is open at top, and protected by a metallic case with a slit its whole length, to allow the height of the water to be seen. This case is graduated, so that when it is wished to ascertain the strength of steam, the cock is opened, and the water allowed to subside until the steam begins to open the valve, when the mark on the case, opposite the surface of the fluid in the tube, indicates the pressure; and this it will do to the fraction of an ounce.

In this valve there is no friction to be overcome. No lever, stuffing box, weight, bolts or joints, to obstruct its operation. *It cannot be overloaded.* The common valve is very liable to adhere to its seat, when not frequently moved, by the accumulation of saline or other matter upon it, but the elevation of this valve above the surface of the boiler, and its inverted position, prevents this from taking place. Moreover, a portion of condensed steam constantly collects above it, and occasionally oozes out, thus cleansing the surface and preventing the formation of any matter upon it whatever. One has been attached to a high-pressure boiler in this city for three years; and not an hour's labor has been expended upon it during that time; nor has it once ceased to operate with perfect accuracy—the steam always blowing off as soon and as long as its tension exceeded the prescribed limits.

It is respectfully submitted to owners and captains of steamboats, whether the adoption of this valve would not prevent explosions that arise from *one* acknowledged source—an excess of steam: and at the same time put to silence the complaint of the public on that subject. Very respectfully,

THOS. EWBANK.

P. S.—One of them is at Mr. Worrall's Foundry, Elm Street, New-York.

LIST OF RAILROADS IN THE UNITED STATES.

(Continued from page 433.)

Boston and Worcester Railroad.—This Company was incorporated June 22d, 1831, with a capital stock of $1,000,000. Surveys had previously been made by the authority of the Legislature of the State, with a view to determine its practicability and expense, the result of which was altogether unfavorable. In 1831, however, the Company commenced their approximate location, which was completed in November of the same year, and shortly after part of the line was put under contract. The line, as now laid down, leaves Boston not far from the foot of the Common, and after passing over the flats at the mouth of Charles River, on a construction partly of arches of masonry built on piles, and partly of trestle work, it proceeds up the south side of the valley of this river to Newton, a distance of 8 miles. Two miles farther, the line crosses the river on a bridge of a single span of 120 feet. It is built on Long's patent. The abutments are of hammer-dressed dry masonry, in height above river 35 feet, and cost $6000. One mile farther, it enters Needham by a short heavy cut of 60 feet, immediately succeeding an embankment 600 feet long, and 30 feet high. Soon after it passes through a cut 31 feet high, and 500 long, excavated through a hard granite formation. The line then enters a pond half a mile long, and originally 7 feet above grade, the drainage of which passes down along the road, which is here constructed on piling, 35 feet deep. Thence, crossing the Worcester Turnpike, it follows parallel to the line of the Central Turnpike, to the south end of Morse's Pond, which it passes on an embankment 47 feet high and 700 feet long. Here it enters Natick by a rock cutting of 20 feet, forming a summit, whence it descends at the rate of 30 feet per mile to the south end of Natick Pond, which it doubles by a strong curve. Thence the line passes by easy grades and light work to the valley of Concord River, the bend of which is crossed at Shepherd's Mills by two bridges, of the same kind of masonry as previously described; one of two semicircular arches of 22 feet span and 18 feet rise, the other of 17 feet span and 4 feet rise. Ascending the valley of Concord River to its rise in Westboro' Swamp, (3 miles long,) it passes the town of Westboro' and a dividing ridge, and enters the valley of Elizabeth River. Ascending again, to its head, it passes a summit at Cutler's Peak into the valley of Long Pond, which it passes on a high embankment one-fourth of a mile long, over soundings averaging 20 feet in depth. Thence, rising 30 feet a mile, over a rough country, it passes through the main dividing ridge, 500 feet above tide, by a cut 37 feet deep and 1500 feet long, of hard slate rock, into the valley of the Blackstone River, crossing which it immediately after enters Worcester. The Clarence pattern of rail has been adopted for the whole line. The chairs are fastened immediately to the sleepers (chesnut and swamp cedar,) laid transversely in pits of well rammed rubble. The whole cost of superstructure is about $6000 per mile of single track. The grading for a greater part of the line is finished; that for the remainder, and the laying of the rails, is rapidly progressing, so as to leave but little doubt but what it will be opened through its entire length by the spring of 1835. Eight miles of the road has been opened since April, upon which a locomotive has daily carried an average number of 230 passengers. The whole road is going on successfully, and nothing as yet has occurred to lessen the belief that it will be finished at the time and for the sum contemplated in the original estimate of the engineer, upon whom the work is calculated to reflect the highest credit. The table of ascents and descents is as follows:

16 1-4	miles are level	
2 5-8	"	rise 13 feet
5	"	" 21 "
3.4	"	" 27 "
13 5-8	"	" 30 "
43 1-4	miles total distance.	

Boston and Lowell Railroad, Massachusetts.—This road was incorporated June 5th, 1830; construction commenced November 28, 1831; length of road, 25 1-2 miles; width of way, 26 feet in cutting, and 24 feet on embankment. The road is to be formed for two tracks, but only one will be laid through at present. About 8 miles of one track, and 2 or 3 miles of the other track, are laid. The excavations and embankments are principally done, and also the bridges and culverts. The trench walls are nearly completed. There will be 69 river and road bridges, 18 under and 51 over the railroad, beside 12 streets and passage ways to be crossed on a level. The iron rails to be used are of the Liverpool and Manchester, or fish-belly pattern, in lengths of 12, 15, and 18 feet, weighing, with the cast iron chair, about 55 lbs. per lineal yard, chairs 17 lbs. The rails are to be supported every 3 feet on chairs, bolted to stone blocks and stone sleepers, which rest on continuous trench walls, the bottoms of which are 2 1-2 feet thick, and from 30 to 36 inches below the surface of the road-way. The space in the clear, between the rails of a track, is 4 feet 8 1-2 inches, and the top of the rails will be 10 1-2 inches above the surface of the road. The space between the tracks is 6 feet. The stone blocks are generally of granite, and contain 3 1-2 to 4 cubic feet. The stone sleepers which lay across the track are 7 feet long, and vary from 6 by 12 to 10 by 12 inches square. The line of the road crosses Charles river, by a wooden bridge 1,600 feet long. The inclination of the road will not exceed the rate of 1 in 528, or 10 feet to the mile, except a short portion in Lowell. The curves are intended to be of 3,000 feet radii, and upwards, except about 500 feet across the canal in Lowell, where the radius of curvature will be 1,200 feet. There will be about 29 portions of curved line, and 30 portions of straight line. The longest straight line will be short of 3 miles. All the level portions will not exceed 1 1-2 miles. The railroad at the depot in Boston will be about 7 feet above base, or ordinary high water mark. The greatest elevation is in Billerica, 4 miles from Lowell, and is 118 feet above base, and the terminus in Lowell 87 feet, or 80 feet above the depot in Boston. This railroad will open a communication between Boston and the manufacturing town of Lowell, situated on the right band of Merrimack river, 30 miles above its mouth at Newburyport.

From Lowell the river is made navigable 50 miles, to Concord, N. H., by means of locks and short canals built thereon; and, by the Middlesex canal, which enters the Merrimack 2 miles above Lowell, a water communication of 30 miles is open from Lowell to Boston. Very little agricultural produce is brought by this communication down to Lowell or Boston, but large supplies of wood and lumber are obtained. All the kinds of foreign productions generally consumed in the country, with much grain and flour from the middle states, are carried up by the canal and river, and distributed at the various landings. The manufacturing establishments at Lowell, on the Merrimack, and its tributary streams, have been the cause of the principal traffic carried on upon their waters. It is now 40 years since these works for inland navigation were commenced, and their value has been much improved by the increase of manufactories in their vicinity.

This railroad is the offspring of the same spirit of improvement which has built up Lowell, and it is owned chiefly by the same persons, who have invested large sums to carry on the works there.

The large amount of cotton, wool, iron, coal, oil, dye stuffs, manufactured articles, &c., &c., to be transported by the various manufacturing companies at Lowell, with the passengers, will be to the railroad the main source of its income, until other railroads shall be extended farther into the country.

Boston and Providence Railroad.—This company was incorporated in 1831; the work was commenced in Dec., 1832; two-thirds of the grading is now, June 20, 1834, accomplished; 11 1-2 miles of railway are now in use. The road bed is graded for a double track, being in no place less than 26 feet wide, and in the deep cuts 30 and 40 feet. The length of the road is about 41 miles. The capital of the company is $1,000,000, and the estimated cost is within the capital. This railroad will undoubtedly be a portion of the "great route" for communication between New-York and Boston. It is the straightest route, (taking into view its length,) in the world. The curves are mostly of 6,000 feet radius; there is one continuous straight line of 16 1-2 miles. The rail is of the heaviest, weighing 55 lbs. to the yard; is laid on cedar sleepers. The road passes through the townships of Roxbury, Dedham, Canton, Mansfield, East Attleboro' and Seekonk, traversing a most beautiful country. Locomotive engines are used. The passenger cars of the best kind, made in New-Jersey, by the Messrs. Greene.

In Canton, over the Stone Factory Pond, there is a splendid structure, 450 feet in length, and from 40 to 50 feet above the natural surface, built entirely of granite, in the most permanent manner. It is called the "Canton Viaduct," and is one of the finest structures of the kind in the United States. There are 15,000 perches of solid masonry in this structure. It is being built by Messrs. Dodd and Baldwin, of Pennsylvania. The entire road is being built in the most permanent manner.

Stonington and Providence Railroad.—This road is to commence at Stonington Cove, on Long Island Sound, to which place there is an almost entire uninterrupted steamboat navigation from New-York during the year, and extend to Providence, R. I., 48 1-2 miles, where it will probably connect with the Boston and Providence Road, and thereby make an uninterrupted communication between Boston and New-York during the whole year. The elevation to be overcome does not exceed 302 feet, and may be so distributed as to be adapted to locomotive engines. The following shows the character of the route: 14.75 miles level, and under 2 feet; 7 miles under 8 feet; 13.66 under 13 feet; 3.81 under 20 feet; 7.19 under 26 feet; 1.36 under 34 feet to the mile, which gives an average of about 12 feet per mile. The work is to be graded for a double track, but for the present a single track only is to be laid down, with occasional turn-outs, and an edge rail of sufficient strength to require supports every 4 feet. The grading of the route for a double track is estimated to cost $505,830.90; the superstructure, $480,000; land and fencing, $50,000; moving power, cars, agencies, &c. &c., to complete $103,583.09. Total, $1,139,413.99. Operations commenced on this road in 1833, and the work is progressing.

Lowell and Brattleboro' Railroad, Vt.—This road is not yet chartered.

Boston and Salem Railroad.—Contemplated; not commenced.

Boston and Taunton Railroad.—Will probably be connected with the Boston and Providence road at some convenient place.

Worcester and Norwich Railroad.—A charter was granted for this road in 1832. A survey was made, by which it was ascertained to be a very favorable route. The distance from Worcester to Norwich is 60 miles. The country fertile and densely populated. The legislature of Connecticut granted a highly favorable charter, connecting with it a bank, which is required to subscribe for a part of the stock. Nothing has been done, as we are aware of, towards making the road.

Tonewanda Railroad.—Commences at Rochester, and is designed to pass through Batavia to Attica and Buffalo. Incorporated in 1832. Capital, $1,000,000.

Ithaca and Owego Railroad.—This was one of the earliest chartered railroads in the state, with a capital of $300 000; is 29 miles in length, and has two inclined planes ascending from Ithaca. The first is 1,733 1-2 feet in length, and rises 1 foot in 4.28, or 405 feet; the other is 1,733 1-3 feet long, and ascends 1 in 21 feet. The whole elevation above the Lake overcome is 602 feet, within 8 miles; after which there is a descent of 376 feet to Owego. Stationary power is used on the first, and horse power on the other plane, as well as upon the other part of the road. The curves are upon a large (say from 7,000 to 100,000 feet) radius. The road is constructed in a substantial manner much of the way. Trenches are made lengthwise, about one foot deep, filled with gravel rammed, upon which longitudinal sills, 4 by 12 inches, are placed; then cross ties are placed 3 feet apart, with chairs to receive the rail, upon which the iron plates, 2 1-4 by 5-8 inch are laid. The width of the track is 56 1-2 inches. It is in successful operation, and will add greatly to the prosperity of the two flourishing towns at its extremities.

Catskill and Canajoharie Railroad.—This road was intended to divert a part of the business of the Erie Canal to Catskill. The stock was subscribed, but nothing has been done on the road.

Port Kent and Keesville, or the Ausable Railroad.—This road will be 4 1-2 miles in length. The ascent of 40 feet to the mile.

Danville and Rochester Railroad, N. Y.—Was chartered in 1832, with a capital of $500,000. The road has been surveyed and the stock taken. When completed, it will add much to the business of Rochester, and afford great facilities to the country through which it passes.

Saratoga and Schenectady Railroad.—This road was commenced the 1st of September, 1831, and was opened for travelling 12th July, 1832, except a short distance at Ballston, which was completed in April, 1833. Its length is 21 1-2 miles. Its cost, $297,201.22, exclusive of the land it occupies, and some trifling agencies and travelling apparatus, but including every thing, when in complete operation, $297,237. About 3 miles of it is put down on stone foundation. Trenches were dug 2 1-2 by 2 1-2 feet, and filled with broken stone, closely rammed; and upon this square blocks of about 2 cubic feet were

placed, 3 feet from centre to centre. On these stone blocks, cast iron chairs are placed to receive the wooden rails, upon which is the iron plate. Cross-ties of timber secure the rails from spreading. The remainder of the road is laid upon longitudinal sills, upon which the sleepers rest, notched on both sides, to secure the sills in their place, and also to receive the wood rail, upon which rests the iron plate, as in the first part of the road. It has but a single track, with turn-outs. The road is mostly level, and in no case does the inclination exceed 16 feet to the mile. Steam power is used to great advantage, and the net income of the road from April 1, 1833, to February, 1834, was within a fraction of 10 per cent. upon its capital. It will be much more profitable, when the Saratoga and Fort Edward road shall be completed.

Saratoga and Fort Edward Railroad.—This road is designed to be a continuation of the Saratoga and Schenectady road. It was chartered in 1832, and has been surveyed, but not yet commenced, that I am aware of.

Salina, Watertown, and Ogdensburgh Railroad.—At present only contemplated. It will, however, be hereafter made, and continued on south, through Homer, to Binghamton.

Madison County Railroad.—Commences at Chittenango, on or near the Erie canal, and terminates at Cazenovia. It is also in contemplation to extend this road through De Ruyter to Binghamton, there to connect with the great New-York and Erie road, and also with the Lackawana and Binghamton railroad to the coal region of Pennsylvania, by which the salt works at Salina will be supplied with anthracite coal.

Rochester Railroad.—This road extends from Rochester to the head of ship navigation, on the Genesee river, about 3 miles in which it has a descent of 254 3-4 feet, 156 1-2 of which is within 1,000 feet of its termination. It cost a fraction less than ten thousand dollars per mile; was completed and in use the 1st January, 1833.

Buffalo and Geneva Railroad.—Some movements have been made towards obtaining a charter for a railroad between these two points. A railroad will eventually be made over this ground, to connect with a railroad between Geneva and Ithaca, and thence by the Ithaca and Owego, and the New-York and Erie railroad, to this city.

Buffalo and Erie Railroad.—To extend from Buffalo, along the Lake, to Aurora.

Buffalo and Black Rock Railroad.—This road is 3 miles in length, constructed with sills hewed on one side, and covered with plank, laid tranversely, extending quite across the road, thereby forming a horse path and a covering; upon the plank is laid a white oak scantling, 2 by 4 inches, parallel with and directly over the sills; upon this scantling is laid the iron rail, 2 inches by 1-2 inch. The cost of this road is less than $2,500 per mile.

Utica and Schenectady Railroad.—This road was chartered in 1833, with a capital of $3,000,000. Over $14,000,000 were subscribed. It has been surveyed and located. The contracts will soon be let, when operations will commence. The route is a very level one, and well calculated for locomotive power. Its length will be about 100 miles.

Rensselaer and Saratoga Railroad.—This road commences and crosses the Hudson at Troy, and passes up on the west side of the river to Waterford; thence to Ballston Springs. The grading is partly completed.

New-York and Albany Railroad.—This road has not yet been, and probably will not be commenced, at present. It was incorporated in 1832. It is to pass up on the east side of the Hudson River, to Albany; its capital $3,000,000. The facilities for river navigation are so great, that this road, for a time, at least, would not be a profitable investment.

Harlaem Railroad.—This road was chartered in the winter of 1831, with a capital of $500,000. The work was commenced in the spring of 1832. The grade was required to correspond with the regulation of the streets, which has required much deep cutting and some high embankment. About 4 miles of the road are now in use, upon which pleasure cars constantly run for the accommodation of those who desire to get out of the city for a short time. When completed, there will be a tunnel of some length through a rock, at Yorkville, after which there will be a gradual descent to Harlaem river. The work thus far has been very expensive, and will cost, when completed, at least its whole capital, and probably more. At present horse power is used. A locomotive engine was provided and used for a short time, but from carelessness, or some other cause, the boiler burst, and the engine was laid aside.

Brooklyn, Jamaica, and Long Island Railroad.—The road to Jamaica has been located, and may be made within a year or two; but that part beyond Brooklyn to Sag Harbor, designed as a substitute for steamboat navigation on the Sound, with the exception of about 25 miles from Sag Harbor to Stonington, probably not immediately—although it will eventually be made. There are so many other roads to be made where there are not as great facilities for business as on, or about Long Island, that this road will not be made for some years.

Paterson Railroad.—This road will extend, when completed, from Jersey City to Paterson, passing, in its route, Bergen ridge, through which there is a deep cutting of near fifty feet, and much of it through solid rock, two extensive marshes and two navigable rivers. It passes the rivers upon bridges; that over the Hackensack is 1700 feet in length, and upon Col. Long's plan, so constructed as to permit vessels to pass; one by a slide and the other by draw. It is constructed in a substantial manner, with cedar sleepers and pine rails, upon which is placed the flat wrought rail, 2 1-2 by 1-2 inch. The first division, from Paterson, 4 miles, to Aquackanonk was ready for use in the spring of 1832. The second division, to the Newark turnpike, west side of Bergen hill, 1st December, 1833, since when cars have run regularly to that point, from whence the passengers are taken to Jersey city in stages. The fare from New-York to Paterson, 16 miles, including ferriage, is 50 cents, and the route is performed with horse power in two hours. There is much heavy work on the route, especially in deep cuttings and embankments. The deep cutting at Bergen hill is not yet completed, and probably will not be this year, but to facilitate business, and to accommodate the Newark Railroad, which is to be in use this fall, a single and temporary track is laid down over Bergen ridge, and will probably soon be in use to theHudson river.

New-Jersey Railroad.—This road is to extend from Jersey city, opposite Courtland st. New-York, through Newark and Elizabethtown to New Brunswick. The first 2 1-2 miles from Jersey city, to the west side of Bergen ridge, will be used in common with the Paterson road. This road is now nearly ready for use, and will probably be completed to Elizabethtown this year. It is to be constructed in a permanent manner, and will eventually be a part of the great North and South, or Atlantic Railroad.

Camden and Amboy Railroad.—Extends from South Amboy to Camden, directly opposite Philadelphia. Its course is uncommonly direct. Its curves are few, and generally of a radius exceeding 1,800 feet. On the 1st division, from Camden to Bordentown, 34 1-2 miles, not yet completed, the route is remarkably favorable, mostly level, and seldom has an inclination of 20 feet per mile. The second division, from Bordentown to Amboy, 26 1-2 miles, now in use, is more rugged, having an ascent from Amboy of 45 feet per mile for a short distance. The rails are of rolled iron, 16 feet long, 2 1-8 wide on top, 3 1-4 at bottom, and 3 1-2 inches deep. The neck a half inch thick; weight, 39 3.16 lbs. per yard. They are secured by clamps of iron, and rivetted at the end of each bar. The rails are secured to the stone blocks and sleepers, by means of nails or pins at the sides, driven into wooden plugs. In order to prevent abrasion and concussion, thin slips of wood are put between the rail and the blocks. The *tracks* are 56 1-2 inches wide. Total estimated cost of the road, with a double track, $1,120,322.14, beside real estate, $115,792.84. $180,000 for steamboats, $41,587.65 for locomotives and cars, and $8,674,01 for wharves and piers. This company have obtained the exclusive privilege across the state. A branch is authorised to New-Brunswick. Steam power is used, and the distance from New-York to Philadelphia is now performed daily in about seven hours.

Delaware and Susquehannah Railroad.—This road is designed to extend from Elizabethtown, N. J., by the way of Somerville to Belvidere, thence through the Lackawana coal region to Pittston, on the Susquehannah. It has been chartered both in New Jersey and Pennsylvania, and the route has been surveyed, but the work has not been commenced.

Philadelphia and Trenton Railroad.—This road extends from Philadelphia to Trenton, N. J., along the Delaware, and but for the charter of the Camden and Amboy railroad, which secures the exclusive privilege of a railroad across the state, it would be continued to New-Brunswick, there to unite with the New-Jersey railroad to New-York, and thus form a continuous railroad between the two cities. Distance, 27 1-2 miles, which will be completed in a few weeks, when there will be, with the exception of the 25 miles from New-Brunswick to Trenton, N. J., a railroad completed or under contract, from New-York to Washington city, and to Winchester, Virginia.

Lackawana, Pa.., and Binghamton N. Y., Railroad.—Contemplated to connect the Delaware and Susquehannah Railroad, with the New-York and Erie, and with the Salina and Binghamton Railroad, and the Chenango Canal at Binghamton, thereby opening the coal region of Pennsylvania to the interior of New-York.

Pittston, Pa., and Chemung, N. Y., Railroad.—Also contemplated to open a communication with the interior of New-York by the Chemung Canal.

Williamsport, Pa., and Elmira, N. Y., Railroad.—A third route from the interior of Pa. to the interior of New-York. This road was chartered in 1832. The route has been surveyed, but I am not informed what progress, if any, has been made with the work.

Philadelphia, Germantown, and Norristown Railroad.—The act of incorporation of this company was granted by the Legislature of the state of Pennsylvania in the winter of 1830–31; and the preliminary surveys for the final location of the line commenced early in the spring, and the work was put under contract, and commenced in July of the same year. The line as now constructed to Germantown leaves the corner of Ninth and Spring Garden streets in Philadelphia, and soon after enters the valley of Cohocsing, which stream it crosses by a handsome viaduct of mortared rubble, in one arch of 20 feet span, and a total height of structure of 25 feet. Curving there to the left, it passes up the valley of the Cohocsing, crossing the Germantown road by a skewed viaduct, on Town's plan, of 73 ft. span, on abutments of cut stone mortared masonry. Thence through a summit it joins the valley of Fisher's Run, up which it ascends, crossing Fisher's Lane by an arch of 33 ft. span, and 24 ft. high, of rubble masonry, and immediately after reaches Welley's Factory, where it ceases. The original location was based upon the necessity of passing through Germantown, thereby rendering the construction of the line liable to extremely heavy excavations and embankments, and a bridge over the Wissahiccon more than 100 feet high. This line, by a special act of the Legislature, the company has been enabled to abandon entirely, and are constructing the road anew, branching off at Weiss's Tavern, and immediately after gaining the valley of the Schuylkill, up which it will proceed by easy grades and light work to Norristown. The grades on the part now constructed vary from a level up to 32 feet per mile, the alignement of which consists of numerous curves, on radii of from 700 to 3,500 feet. The superstructure consists of a Clarence rail and chair, fastened by means of a screw and nut to stone blocks. The graded surface is 25 feet, on which a double track has been laid for the whole distance to Germantown. The highest embankment is 18 feet, and the deepest excavation is 17 feet, and yet the road has already cost the enormous sum of $250,000! or a little more than $41,000 per mile.

The West Chester Railroad.—Is a branch from the Philadelphia railroad to the flourishing village of West Chester. It unites with the Pennsylvania railroad on the South Valley Hill, two miles west of Paoli. It is the property of a company composed of enterprizing citizens of Philadelphia and West Chester. Length, nine miles; cost about $100,000. Completed, and now in use.

Little Schuylkill Railroad.—From Port Clinton, at the mouth of Little Schuylkill, to the village of Tamaqua, on that stream—distance 21 1-2 miles, with several branches to coal mines. This is the work of a company, and is designed principally to transport coal to the Schuylkill navigation. Finished, and in use.

Mine Hill and Schuylkill Haven.—At the mouth of the West Branch of Schuylkill, up that stream 10 1-2 miles, to Mine Hill Gap. Finished and in use. Trade, coal. Belongs to a company.

Mount Carbon Railroad.—From Mount Carbon, one mile below Pottsville, up the valley of the Norwegian creek; main line and branches, about seven miles. Finished and in use. Trade, coal. Belongs to a company.

Danville and Pottsville Railroad.—From Pottsville to Sunbury, opposite the forks of the Susquehan-

nah. Length, 45 miles; eight miles nearly completed. It is designed to accommodate the great coal region on the Shamokin, Mahoney, &c., and to connect the Susquehannah with the Schuylkill canal. Belongs to a company.

Schuylkill Valley Railroad.—From Port Carbon, at the head of Schuylkill navigation, up that river to the town of Tuscarora—distance 10 miles. Trade, coal. Belongs to a company. Finished, and in use.

The Mauch Chunk Railroad.—The first of any magnitude completed in the United States. From the head of the Lehigh Canal, at Mauch Chunk, to the coal mine on the summit of Mauch Chunk mountain. Aggregate of main line and branches, 12 3-4 miles. Belongs to the Lehigh Coal and Navigation Company.

The Roan Run Railroad.—From Mauch Chunk, up the Lehigh, to a coal mine—length, 5 1-4 miles. Finished, and in use. Belongs to the above company.

Lyken's Valley Railroad.—From Millersburgh on the Susquehannah, up Lyken's Valley, to a Coal Basin in the Brody Mountain. Distance, 16 1-2 miles. Began, and completed in 1833.

Carbondale Railroad.—Belongs to the Hudson and Delaware Canal Company, and connects that work with the Coal Mines in the valley of the Lackawana. Length of road, 16 1-4 miles. Finished and in use.

Alleghany Portage Railroad.—This road connects two canals, one of 171, and the other of 104 1-4. Its length is 37 miles, in which it overcomes an elevation, by inclined planes, of 1,399 feet. There are ten inclined planes, varying in length from 1,500 feet to 3,100 feet, and, in inclination, from 4 degrees, 8 min., 48 seconds, to 5 degrees, 51 min., and 9 seconds, from a horizontal plane. The ascent on the east side is 1,399, and the descent on the west 1,172 feet. The summit is a tunnel of 900 feet in length. The entrances are both arched with cut stone. There are 4 viaducts on this road, varying from 40 to 80 feet span, and 68 culverts, with span varying from 3 to 25 feet. These works are all of the very best masonry. There are also 85 drains, or square culverts, built of stone, making 157 passages for water under the road. The viaduct over the Juniata, at Holidaysburg, is of cut stone; has two oblique arches, with spans measured on the face 40 feet 3 1-2 inches, or of 33 feet at right angles. The viaduct over the Little Conemaugh has an arch with a span of 80 feet, and is 78 1-2 feet high from foundation to top of parapet wall. On the inclined planes the superstructure is of wood rails, with flat iron bars, but the other parts of the road have the wrought iron English edge rails, which cost, delivered on the spot, $70 per ton. The rails are laid upon stone blocks, with cast iron chairs, except on high embankments, where wood sills and cross ties are used. The road, when completed, with the necessary machinery for use, cost $1,49-5,739.50. (See Railroad Journal, Vol. I., page 645, and Vol. II., pp. 66 and 564.)

Philadelphia and Baltimore Railroad.—This road will form a connecting link between the Pennsylvania and Maryland railroads. It diverges from the Pennsylvania, or Columbia Railroad, 45 1-2 miles from Philadelphia, passes through Oxford, and will strike the Susquehannah about half a mile above Port Deposit. Its length will be 20 1-4 miles, within the state of Pennsylvania, and 11 miles in Maryland, without even a bridge or a culvert. The ground is highly favorable for a railroad, which, with a double track of wood superstructure and flat rails, is estimated to cost $12,030 per mile. The grade of the road is favorable, having only in one place an inclination over 30 feet per mile, where it is 44 feet per mile. The curves are one radii of 1000 feet and over.

The above list is believed to comprise all the important railroads in Pennsylvania, actually finished, or upon which arrangements have been made for their early completion. Some smaller or branch lines have been probably overlooked.

Newcastle and Frenchtown Railroad, Delaware.—This road is considered by many as one of the best in the country. It was commenced at an early day, and was in use nearly through its entire line on the 1st of April, 1832, yet we have never received any particular report, or information, as to its cost, &c., &c. Its length is 16 miles, from Newcastle, on the Delaware, to Frenchtown, on the Chesapeake. It is said to be constructed in a superior manner. Locomotive power is used, for which its grade and curves are highly favorable.

Baltimore and Ohio Railroad.—This road was chartered in 1827, with a capital of $6,000,000. The grand object of this road was to open a direct and easy communication from Baltimore to the always navigable waters of the Ohio, at Wheeling, or some other suitable place. The work was commenced July 4, 1828, yet very little was done until October of that year. The first division of the road has been constructed, on account of the unfavorable topography of the country, at great expense. There are some very heavy excavations and embankments, and expensive viaducts. The graduation alone of the first 13 miles, cost over $381,000, or over $29,000 per mile, and the masonry on the same section cost $17,160 64 per mile. This road was arrested in its progress for a length of time, by coming in contact with the Chesapeake and Ohio Canal. A settlement was made, however, and it is again progressing towards Harper's Ferry. It has been in successful operation from the Point of Rocks for more than a year. The enterprise of this company has done much toward disseminating a spirit for improvement in other states. It has been visited by those interested in similar works, from all sections of the country, who have returned and carried with them information which enables them to diffuse amongst their neighbors a spirit which will produce, eventually, the most beneficial results. It is much to be desired that this work should be continued on to its intended termination, the Ohio River. (See Railroad Journal, vol. i. p. 657.)

Baltimore and Washington Railroad.—This road is to connect with the Baltimore and Ohio railroad, 8 miles from Baltimore, and is, in fact, an appendage to the Baltimore and Ohio road. It will be about 32 miles in length, exclusive of the Baltimore and Ohio, and is estimated to cost about $1,500,000. The distance from Baltimore to Washington is 40 miles, which it is contemplated to run with locomotives in two hours.

Atlantic and Ohio, or James and Kanawha Railroad.—A work second to no other in the South, and yet scarcely agitated at the present time. The contemplated railroad from York, or Elizabeth river, on the Chesapeake Bay, up James river to the valley, and up the valley to New River, and thence down that and the Kanawha, or in its vicinity, to the Ohio river, must eventually be constructed; and, when *properly* constructed, Virginia may again look for commerce within her limits. Such a work *will be* constructed, and it only remains for the present generation to decide whether they will enjoy its benefits or leave them for the next.

Petersburg and Roanoke Railroad.—This road was chartered in 1830, with a capital of $400,000. It commences at Petersburg, and terminates 1 1-2 miles below the falls of the Roanoke, and is 59 miles in length, a distance of 3 1-8 miles only greater than a straight line. Its curves are mostly on radii of 2 to 9 miles, and after leaving Petersburg it has in no place a greater inclination than 30 feet per mile. It is said to be one of the best built and best managed railroads in the country. The graduation of the road and masonry of the bridges, culverts, and other constructions, are of the most permanent kind. The superstructure is of white oak sills, 12 inches in diameter, heart yellow pine rails, 5 by 9 inches, plated with iron, 1-2 inch by 2 inches wide. One-half of the road was opened for use in October, 1832. The remaining part, or to within a few hundred feet of the Roanoke, was completed and used in August, 1833. Locomotive engines are used to great advantage on this road.

Portsmouth and Roanoke Railroad, Virginia. Commences at the town of Portsmouth, opposite Norfolk, and passes through Suffolk, over a very level country 77 miles, being only half a mile farther than a direct line. It crosses the Petersburg Railroad, and terminates at the north bank of the Roanoke river, opposite Weldon. in North Carolina. The greatest inclination is only 20 feet per mile, and 5730 feet is the smallest radius. This road is estimated to cost $475,000. The surveys have been completed, and the work commenced between Portsmouth and Suffolk. This road, when completed, will compete with the Petersburgh and Roanoke Railroad.

Winchester and Potomac Railroad.—This road was chartered in 1831, or '32. It was put under contract in November, 1833, with fair prospects of early completion. It will connect with the Baltimore and Ohio Railroad at Harper's Ferry, and at no distant day be continued south through the Valley of Virginia, and probably either continued on to Knoxville, in Tennessee, or follow New and Kenawha rivers to the Ohio. It is *impossible* to arrest the spirit of internal improvement, especially in a section of country that has so many natural advantages as Virginia. Her wealth in minerals, water power, and resources for enriching her soil, are not duly appreciated by her citizens. They are, however, becoming so, as will ere long be seen.

Richmond, Fredericksburg, and Potomac Creek Railroad.—The citizens of Richmond and Fredericksburg have made some considerable effort to make a railroad from the Potomac to Richmond. The distance is about 70 miles; the country level; the present roads, especially in the wet season, as bad as need be. Present appearances are favorable to the progress of the work, as a party of engineers are at this time (July, 1834,) engaged upon it. Should it be made, and also continued to Petersburg, Virginia will have done her share towards completing the great line through the Atlantic States, as connected with steamboat navigation.

Pulaski, Tennessee, and Florence, Alabama, Railroad.—The route for this road has been surveyed, the stock taken, and the directors elected. It is to be commenced this fall at both ends, and will be, when completed, 59 1-2 miles in length.

Elkton, Tennessee, Athens and Decatur, Alabama, Railroad.—A railroad is contemplated from Elkton, Tennessee, through Athens, to intersect the Tuscumbia, Courtland, and Decatur Railroad, probably at Decatur.

Tuscumbia, Courtland, and Decatur, Alabama, Railroad.—This railroad, the first undertaken in the far South, (except perhaps the Pontchartrain and New-Orleans Railroad,) was commenced in 1831, and more than 15 miles of it are now in operation; it will be about 30 miles in length when completed, and will probably be ready for use by the 1st of October, 1834. It has wood rails, resting on cedar sleepers, upon which is placed a flat wrought iron rail. Its greatest ascent is 28 feet per mile, and it has but one curve, with a less radius than 1,512 feet, which is 1,380 feet. This road is designed as a link in the great chain of railroad from the Mississippi, to and through the Atlantic States, and it will be intersected by numerous other roads, both from Alabama and Tennessee. It is estimated to cost about 10,000 dollars per mile when completed.

Tuscaloosa and Decatur Railroad.—A railroad is contemplated between Tuscaloosa and Decatur.

Montgomery Railroad.—Some movements have been made for constructing a railroad from Montgomery, Alabama, to some point on the Tennessee river, probably at Decatur.

Quincy Railroad.—A charter was granted for this road in the winter of 1825-6. The object of this road was to communicate with the granite quarries, on the Neponset, about 3 miles from tide water. It was at first laid down with wood, which has been replaced with granite sills. The rail used is the flat bar of iron, 3-8 of an inch by 3 inches, secured to the sills by 3-8 inch iron bolt, 3 inches in length, the head of which fits into a countersink. It is said to be done in the most substantial manner. The sills are laid on ruble stone, placed in a trench 2 1-2 to 3 feet in depth, closely rammed, with a cross piece of granite, 7 feet in length, every 6 feet. Each car carries from 6 to 7 tons; its own weight being about 3 tons. This road has a descent of 27 feet to the mile, in addition to an inclined plane, which descends 84 in the distance of 380 feet. Chains are used instead of ropes for lowering the cars. The empty, or returning cars, tare moved up the inclined plane by the descent of the loaded ones. The cars are moved to the landing by horses, at the rate of 3 1-2 or 4 miles per hour, each team of 3 horses taking seven loads, of 4 cars each, or 150 to 160 tons per day. It is found that the labor of transportation is much easier on the granite than it was on the wood sills.

Boston and Ogdensburgh Railroad.—Chartered by the different states, and formerly much talked of. Should it ever be carried into operation, it will probably connect at Lowell, with the Boston and Lowell road, passing through Concord, N. H., cross the Connecticut, at the mouth of *White* river, at Hartford, Vt.; thence to Montpelier and Burlington, from whence to Plattsburg steambotas would be used during the summer. The result of this work, should it be completed, will be to divert much of the Canada trade to Boston, which will be of immense advantage to that city.

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ERRATA.

In the description of the Ithaca and Owego Railroad, 6th line, for "1,733 1-3 feet long," read "2,225 3-4 feet long." Also, in the same paragraph, 18th line, for "chairs," read "gains."

The cost of the Saratoga and Schenectady railroad, exclusive of the land it occupies, &c., should have been "$217,201 22," instead of "$297,201.22," as printed.

The Art of Brewing—Ox Mill used in the Breweries of Vienna. [From the London Mechanics' Magazine.]

Of the treatises published under the superintendence of the Useful Knowledge Society, one of the very best was that on the "Art of Brewing," by Mr. David Booth; but owing (we believe) to some misunderstanding between the author and the Society, it was left in an incomplete state—two parts only, instead of four, having received the Society's *imprimatur*. Mr. Booth has, under these circumstances, been induced to give Parts III. and IV. to the world through another medium.*

Part IV. is appropriated to brewing in foreign countries, and treats of the art as practised at Munich, Prague, Vienna, Berlin, Brussels, Louvaine, &c. Mr. Booth states, "that for the greater portion of the information in this chapter he is indebted to the manuscript and oral communications of two German brewers (from Vienna and Munich), who have been, and now are, visiting the principal towns of Europe, for the laudable purpose of acquiring information concerning their business."

From this part, being that which contains the most novel information, we shall make a few extracts.

And first, as to the *Bavarian beer*, which, when in prime condition, is "as bright as wine, and contains so much carbonic acid, that it is, in that respect, similar to champagne."

"The beer throughout all Bavaria is nearly of the same strength: usually between 3¼ and 3½ barrels to a quarter of malt. It is made wholly from malted barley and hops; and all sold at an uniform rate, which is fixed by law every year, according to the price of barley; so that there is but one kind of malt liquor for all classes, from the prince to the peasant. The rate for the present year is 16s. per barrel. The beer pays no duty; but the malt must be ground at a public mill, where an impost is levied, amounting to about half of its original value. The malt is screened before carrying it to the mill; and being generally cut with stones, it is also previously damped, in order to prevent the loss by dust. This operation is performed by sprinkling with a watering pan, at the same time frequently turning the heap till it has been well mixed with about two gallons of water to the quarter; and then leaving it to soak for nine or ten hours, that the moisture may penetrate to the centre of each grain. When the malt is to be bruised with rollers, this damping is not considered necessary."—p. 25.

* * * *

"The cellars in Munich are very deep under ground, so that the temperature never rises higher than between 7 and 8° of Reaumur, which is from 48 to 50° of Fahrenheit. In some of them ice is preserved through the summer. It is within such cellars that the beer is cleansed, into casks that lie on heir side, bung uppermost.

* * * *

"After the beer has thus lain from eight to ten months, it is reckoned to be fit for use; and for that end it is drawn off into small casks as wanted, which are immediately carried out to the publican, and on the same day drank by his customers: so that every publican must be supplied with beer every day from the brewery."—pp. 27, 28.

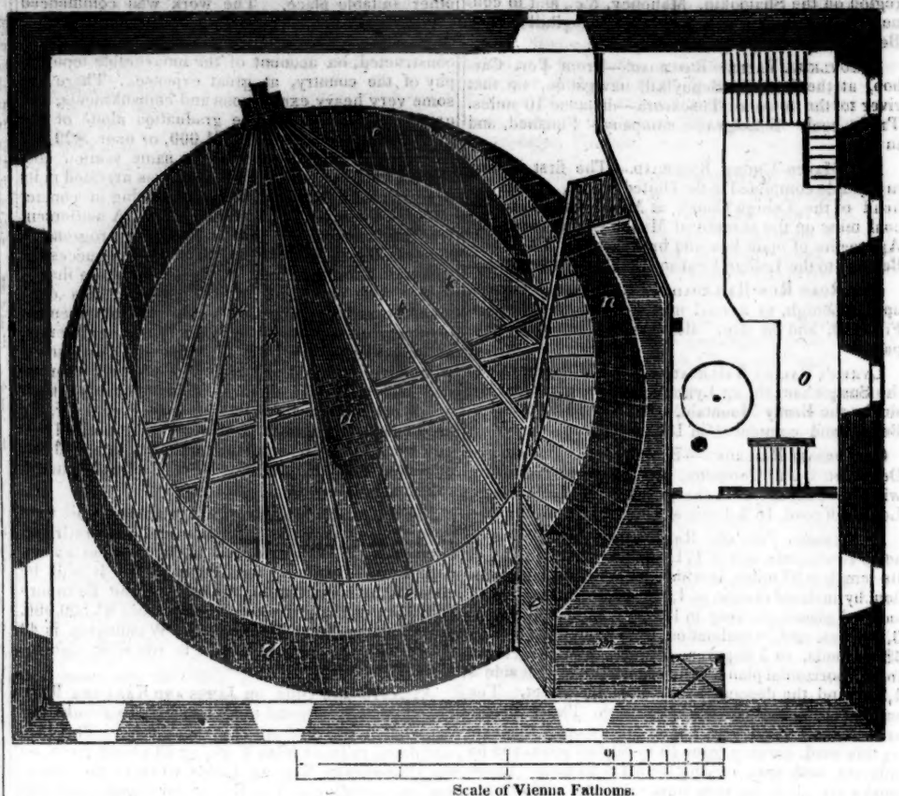
* * * *

"Great care is requisite in having the store-casks very clean and *sweet* before filling them, lest they should communicate a disagreeable flavor to the beer. In two towns this is effected, after they are well washed, by smoking them with burning sulphur; but in the rest of Bavaria it is done by lining them with pitch. The following is the manner by which this is effected at Munich: The store-casks, in which the beer is cleansed, are previously *pitched* every time for summer beer, and once a year for winter beer. Pitching is practised in this way: one end of the cask is taken out, and two English pounds of pitch for every barrel of its contents, if the pitching has only to be renewed (but double that quantity, if for the first time,) is set fire to on the bottom of the cask, and made to burn until the whole has become perfectly fluid. This being done, the fire is extinguished, by putting in the head of the cask and driving the hoops close; and then the cask is rolled about, and turned in every direction, so that the pitch may be spread over every part of the inner surface, which it will thereby cover with a crust of one eighth of an inch thick. This crust is apt to crack and blister, which causes the necessity of re-pitching every season. The professed object of this manipulation is cleanliness; but it doubtless communicates a peculiar flavor to the beer, which, however, is liked, and consequently required, by the customers of those brewers."—p. 29.

* * * *

"The brewers of this city (Augsburg) wash their coolers with great care, scrubbing them every week with Dutch rushes—the stalks of the *equisetum hyemale*; but, notwithstanding this apparent regard to cleanliness, they have one practice which we, in this country, should not venture to imitate. Like the rest of their countrymen, they pitch their store-vats; but instead of waiting until the plaster is cold, they cleanse the fermented worts into the vats while the pitch is smoking and burning hot. It is this which gives the peculiar flavor by which the Augsburg beer is distinguished from that of all the rest of Bavaria."—p. 31.

Fig. 1.



Scale of Vienna Fathoms.

The beer next in continental repute to the Bavarian is that of Prague.

"The city of Prague has been famed for its breweries from time immemorial. These constitute the chief support of a great proportion of its inhabitants; and the beer, next to that of Bavaria, is accounted to be the best in Germany. The mode of brewing is very similar to that which is practised at Munich. The brewers in the city draw one hundred gallons of beer from the quarter of malt, while those of the suburbs make ten to twelve gallons more; and, notwithstanding, the beer of the latter has a more agreeable taste than that of the former."—p. 31.

* * * *

"The beer vaults of Prague, of which every publican has one, are of the very best kind. The floor of each is covered with a deep mass of ice, which never melts, and upon this mass the beer is placed, when received fron the brewer. After it has lain from four to six weeks on its icy bed, it is fit for drinking, and is served out to the customers in that chilly state."—p. 33.

In treating of the method of brewing at Vienna, Mr. Booth gives the following description of a species of tread-mill, by means of which oxen are employed to drive the mill stones and rollers (for bruising the malt), which, though "little, if at all, known in this country," he thinks deserving of more extensive publicity, "believing that it would prove a cheap and convenient power

* The Art of Brewing. Parts III. and IV. By David Booth. To which is added an Appendix concerning Burton Ale. London: F. J. Mason. 8vo., 1834, pp. 56.

Fig. 2.

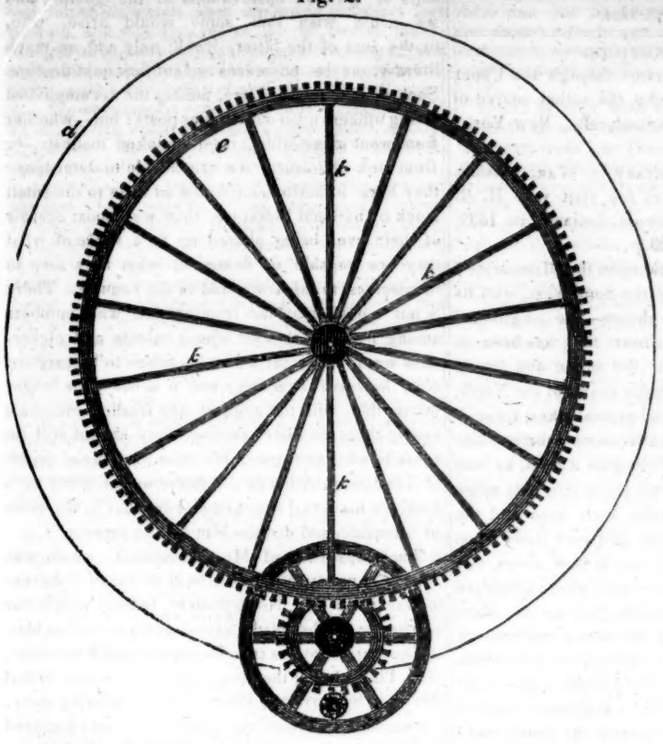
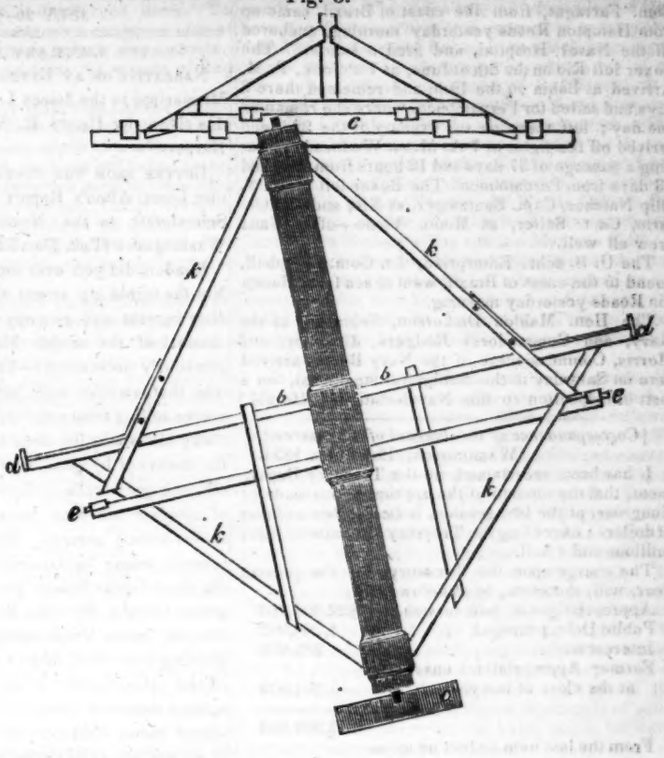


Fig. 3.



in certain situations." We copy also, by permission of Mr. Booth, the engravings to which the description refers:

"Fig. 2 is a section, showing the position of the tread-wheel, *d d*, with respect to its angle of elevation as compared with the horizontal portion of the roof *p p*. The shaft *a*, at right angles, and fixed to the tread wheel, turns on pivots at the top and bottom, which are inserted into strong timber-work. The cog-wheel *c c*, parallel to the tread-wheel *d d*, and also fixed through its centre to the shaft *a*, communicates its motion to such other parts of the machinery as may be required. The wooden spurs *k k k k* sustain the tread-wheel, above and below, uniting a little above the cog-wheel, and fastened at their ends into the shaft. The rim *d d*, being that portion of the circumference of the wheel on which the ox treads, is further supported by the timbers *b b*.

"Fig. 3 is a view of the cog-wheel from above, showing its communication with the other parts of the machinery, such as the fly-wheel *f*, the crank *h*, &c. The spurs *k k*, &c. which preserve it steady in its place, are also seen.

"Fig. 1 is a ground plan of the whole building in which the tread-wheel stands. It is very high, and the main shaft is sunk in an excavation five feet deep in the ground-floor. The same letters of reference which mark the parts of figs. 2 and 3 also apply to this. A bar of boards, *l*, is fixed to prevent the ox from falling down into the pit below, should he accidentally get loose. The wooden gangway, *m*, enables him to get up from the stall below to the stage *n*, on which he walks without moving forward.

"We have abridged the description from the original, and consequently have left some of the letters of reference unnoticed; but we have doubtless said sufficient to be understood. When much power is wanted, the mill is sometimes supplied with three or four oxen together, in a team. The scale affixed to fig. 1 also applies to figs. 2 and 3. It is one of Vienna fathoms, which are something larger than English, 100 of the former making nearly 104 of the latter."—pp. 38–41.

It will doubtless be in the recollection of our readers, that the Burton ale brewers, moved by what was said of their peculiar modes of practice in the second part of this work of Mr. Booth's, applied to the Court of King's Bench for leave to file a criminal information against the publishers of the Useful Knowledge Society; and that, in consequence of Mr. (now Lord Chancellor) Brougham's afterwards stating to the Court, on the part of the Society, that they had, after due inquiry, satisfied themselves that there was no ground for imputing to the plaintiffs the use of any thing, save malt, hops, and water, in the manufacture of their beer, the rule to show cause was discharged. It appears, however, from the extract which follows, that Mr. Booth himself (incredible as it may seem) "was never consulted" with respect to these proceedings; and that had he been consulted, as he ought to have been, the records of the court might possibly have told a very different tale:

"On referring to Chapter X., Part II., of the Art of Brewing, which treats of Burton ale, it will be seen, that, in recommending the adoption of certain ingredients, the writer was careful not to impute the use of them to the licensed brewers; he well knew, that for them every article except malt and hops was illegal, and subjected them to severe penalties. But the question arose, how much was insinuated, and how far such a suspicion might raise a prejudice against their beer—a circumstance directly opposite to the intentions of the author.

"One of the affidavits gratuitously acknowledged the occasional use of flour and salt, to assist the fermentation of the inferior ale; and the jalap, of which it only was said that 'some recommend' for the same purpose (and the use of which is doubted at page 28, Part I.), may as well be left out of the supposed-accusatory list of ingredients. These, then, are reduced to

Salt of steel -	2 oz. to 20 barrels.
Honey - -	1 lb. per barrel.
Sulphate of lime	6 oz. per barrel.
Black resin -	1 oz. per barrel.

"With respect to the proceedings in this prosecution, the writer of the alleged libel, though his character was in some degree at stake, *was never consulted*. It appears, from what followed, that several chemists were employed to analyse the ale, as well as the water of which it was made; and, had he known of their appointment, he would have told those scientific gentlemen, that the honey and resin (granting that they had ever been introduced) *would certainly escape their detection*—that the salt of steel, not being by weight one part in sixty thousand, would possibly be too minute for discovery; and that the sulphate of lime alone would probably be found. The result would have justified the prediction."—pp. 52, 53.

New Method of Harvesting Grain.—We have examined the drawing of a machine to gather grain as it stands in the field without cutting. It is called the Locomotive Thresher; intended to be moved by horse power, and, with the assistance of three men or boys of fifteen years of age, is calculated to go over ten acres of wheat or other grain per day, and gather say two hundred bushels, leaving the straw standing on the ground threshed as clean as is generally done in the ordinary way, thereby saving all the expense of harvesting; and by ploughing in or burning the straw, it is supposed the ground may be tilled *ad infinitum* without diminishing its fertility. Should this invention succeed, it will afford another inducement for farmers to inhabit and cultivate those beautiful prairies which abound in the far west. The ingenious inventor is Mr. John T. Vail, of La Porte, Indiana, formerly of this town.—[Rahway Advertiser.]

NORFOLK, July 18.

Arrival of the Boxer—The U. S. Schr. Boxer, Lt. Com. Farragut, from the coast of Brazil, came up from Hampton Roads yesterday morning, anchored off the Naval Hospital, and fired a salute. The Boxer left Rio on the 8th of June, at 7 o'clock, P. M. Arrived at Bahia on the 12th, and remained there 3 days, and sailed for Pernambuco, where she remained one day; left there on the evening of the 22d, and arrived off the light, at 7 A. M. on Wednesday, making a passage of 37 days and 12 hours from Rio, and 23 days from Pernambuco. The Boxer left the U. S. ship Natches, Capt. Zantzinger, at Rio, and the Ontario, Capt Salter, at Monte Viedo—officers and crew all well.

The U. S. schr. Enterprize, Lt. Com. Campbell, bound to the coast of Brazil, went to sea from Hampton Roads yesterday morning.

The Hon. Mahlon Dickerson, Secretary of the Navy, and Commodores Rodgers, Chauncy, and Morris, Commissioners of the Navy Board, arrived here on Saturday in the Baltimore steamboat, on a visit of inspection to this Naval station.—[Herald.]

[*Correspondence of the Journal of Commerce.*]

WASHINGTON, 19th JULY, 1834.

It has been ascertained, at the Treasury Department, that the amount of the appropriations made by Congress, at the late session, is *twenty-two millions* of dollars; exceeding the Treasury Estimate by three millions and a half.

The charge upon the Treasury, for the present year, will, therefore, be as follows, viz:

Appropriations at late session,	$22,000,000
Public Debt, principal,	4,760,082
Interest on	285,000
Former Appropriations unsatisfied at the close of last year,	5,964,572
	$32,909,653
From the last item deduct as an ascertained excess of appropriations,	774,383
	$32,135,270

The Receipts of the Treasury, for the year 1834, may be stated as follows, viz:

Estimated receipts from all sources	$15,500,000
Probable Excess of Receipts over Estimates	1,500,000
In the Treasury on the 1st January, 1834,	7,985,790
Total,	$27,983,790
Deficiency on the 1st of Jan., 1835,	4,201,460

It is true that a portion of the appropriations may always be exposed to remain unexpended at the end of the year, and that the average of such unexpended balances, for the last four years, has been about five millions.

The Treasury will, therefore, be able to meet the demands made upon it, within the year, but will be in debt, at the end of the year, to the amount of the deficiency above stated.

If Congress had remained in session three weeks longer, they would unquestionably have appropriated, for public and private objects, some two or three millions more.

I see no reason why the appropriations should be less next year than they were this, but many why they should be greater. The appropriations for 1833 exceeded by three millions the appropriations of the previous year, and exceeded the Treasury estimates by three and a half millions; but they were less by half a million, than the appropriations of the present year. The Secretary of the Treasury in his Report at the commencement of the late session, remarks upon the heavy appropriations of the previous year, and forewarns Congress that "a similar amount of expenditure, authorized at the present session, might render it necessary to *provide additional revenue* earlier than is now contemplated." Even if Congress adopted at once "a guarded rule of appropriation," he though it would be necessary, in two years from that time, "to impose duties on article that are now free, in order to meet the current expenses of the Government," inasmuch as, under the compromise act, the duties were to undergo a yearly reduction for ten years.

But it is obvious that the temper and constitution of Congress, especially since the augmentation of the number of representatives, are unfavorable to the "proper economy" and the "guarded rules of appropriation" recommended by the Secretary.

You may be assured, therefore, that the first care of Congress, at the next session, will be to add some five or six millions to the revenue, by restoring the duties on Teas and other articles now free of duty.

NEW-YORK AMERICAN.

JULY 20—25, 1834.

LITERARY NOTICES.

NARRATIVE OF AN EXPEDITION through the Upper Mississippi to the Itasca Lake, the actual source of this river: by Henry R. Schoolcraft. New York: Harpers.

LETTER FROM THE SECRETARY OF WAR, transmitting Lieut. Allen's Report of his visit with H. R. Schoolcraft, to the Northwest Indians, in 1832. Washington: [Pub. Doc. 323.]

Reader, did you ever look upon the Mississippi? Not the turbid big sewer of the Southwest, with its dirty current and swampy shores—the lengthened channel of the muddy Missouri that has been so grievously misnamed!—but the broad and limpid tide, that, swollen with the pure snows of the North, comes rolling from a thousand crystal lakes, through rocky bluffs that lift their battlemented turrets like the towers of by-gone days along its waters, or lead off their grey walls so far into the prairie that miles of meadow intervene between their base and the flower-kissed current. Have you ever stood upon those frowning battlements, and looked down into the clear depths beneath you—there where a hundred green islands, like the floating gardens of Montezuma, seem dropt upon the sunny surface—or glancing from their shadowy copses, have you watched the salient points of the bold bluffs opposite assume a thousand changes as the gorgeous clouds of sunset would drift over the pearly sky above you? If so, you are to be envied for having seen one of the most beautiful rivers of the world, at a season when it wears its loveliest aspect—though, under whatever sky it may be viewed, no one will ever forget his glorious impressions when he first beheld the Upper Mississippi. And this is the stream, so grand and beautiful, whose very tide alone, did it but flow in a contrary direction, would steal one away from the vulgar haunts of men, and lure him on unconsciously into the wilderness, whose sources have been but now explored. The barbarous waters of the Nile and the Niger have had hundreds of victims; and the savage fountains of the Missouri and the Oregon have been long since tasted;—but it is only now, when the commerce of an Empire is floating upon its bosom, that we know where the Father of Rivers takes his rise.

The discovery, we do not hesitate to say, is primarily due to Mr. Secretary Cass, as the institutor of the present expedition; and next to him, the persevering Mr. Schoolcraft, and the accomplished young officer, Lieutenant James Allen, of Ohio, must divide the honor between them. Mr. Schoolcraft was, indeed, the head of the expedition; but, as we shall show hereafter, its difficulties and its dangers were more than equally shared by his military companion; while we apprehend that modesty alone, and not want of ability, has prevented Mr. A. from giving the result of his observations in a form to attract equal attention with the valuable work of Mr. Schoolcraft. Of the two accounts of the expedition, drawn up by these gentlemen, the unpretending and succinct official statement of the young officer, we do not hesitate to say, is the best written of the two; but the more ample and satisfactory publication of Mr. S. embodies a variety of information in relation to the general condition of the country, and the various Indian tribes through which the exploring party passed, that will make it sought with avidity, and will amply repay perusal. Indeed, next to Governor Cass, we can recollect no one to whom the public are more indebted for a laudable research, and industry displayed in illustrating Indian subjects, and unfolding the resources of our northern frontier, than to Mr. Schoolcraft. The former gentleman, (Governor Cass,) however, has been by no means generous in giving the results of his own observations to the public; and we could wish that some would arise, who, to the zeal of the latter, would only add as much literary, as he possesses scientific, qualification. Such we know there are, among the accomplished young officers upon our frontier posts: but—whether from want of ambition, from mistaken modesty, or from lack of leisure, we are unable to determine: they have hitherto contributed so little to the small stock of national literature, that we almost despair of their ever being stirred up to a sense of what they are capable of doing, of what they owe to themselves, to the army, and to the country. There is not a post upon the frontier, but what numbers among its officers men whose talents and cleverness would make them an acquisition to literary circles, however exacting; and it is not to be longer borne, that, with the amplest and freshest materials among them for their exercise, they should still be squandered in obscurity. We take the official report of Lieutenant Allen to the Secretary of War, as a bond for his actual appearance hereafter in the court of literature, and dismiss him for the present.

The expedition of Mr. Schoolcraft, which was nominally undertaken by virtue of an act of Congress to vaccinate the Northwestern Indians within our territories, is the third national attempt that has been made to arrive at the true sources of the Mississippi. Gen. Pike's being the first, and a movement in that direction by Governor Cass, with an exploring party, the second. A ridiculous Italian, of whom a hundred laughable stories are told on the frontier, has in the meantime most absurdly claimed, in a book published abroad, to be the true discoverer of the fountain head. Lac La Biche, or Itasca Lake, as Mr. Schoolcraft more euphoniously calls it, has been long known to the Indian traders, but its position has always been laid down erroneously upon the map; and it is now found that the Mississippi after long running to the north till it reaches a high latitude, and difluses itself in a hundred swamps and lakes, becomes again a distinct stream, and taking a sudden dip to the South, hides its head at last in a lake of clear water somewhere about the latitude of Fond du Lac, on Lake Superior. The discovery, approach to and examination of this important geographical point, is so interesting, that our readers will not blame us for giving here, the impressions of both the discoverers. The limits within which Mr. Allen was restricted, by the nature of an official report, prevented him of course from expatiating upon the scene; but his rapid glance at its general features must not be lost, and we therefore quote his journal.

We entered the Mississippi from a bay on the west side of Cass lake, and passed, in a short distance, through two small lakes and a savanne, above all which we still found a large river forty or fifty yards broad, and from two to six feet deep, which wound its way through a narrow valley of low, alluvial bottom, confined by pine hills, up to Lac Travers, forty miles above Cass lake. In this distance there are many rapids running over boulders of primitive rock, but there is no fall, and no rock is seen in place.

Lac Travers may well be arranged among the sources of the Mississippi. It is a beautiful lake, about ten miles long from north to south, and about half as broad, surrounded by pine woods, which rise into high hills on the north and northwest, forming a part of the chain dividing the waters of the Mississippi from those of Red river. The western shore is much indented with bays, but the east and southeast is beautifully regular and plain, with a sandy bank, and beach of pure white sand. The river empties into the south end of the lake, and runs out at the east side, not far from its entrance, leaving the great body of the lake to the north of our passage through it.—There is a trading house on the west bank, near the mouth of the river, which is occupied, in winter, by a clerk of Mr. Aitkin. From Lake Travers we passed by a broad channel one hundred yards long, into another small lake, and, half a mile above this, came to the forks of the river. The branches are of nearly the same breadth, about forty feet, but the stronger

current of the right hand branch denoted it much the larger. We ascended the left or east branch, as we had intended, which soon narrowed to twenty feet breadth, and in a distance of ten or twelve miles, brought us to Lake Rahbahkanna, or Resting lake, a pretty little lake, four miles in diameter, and nearly round, with a low beach of smooth pebbles all round it. We encamped a few miles above this lake, at 7 P. M., having come this day, by my estimate, fifty-five miles. Our course to Lac Travers was northwest; from the latter, nearly south.

JULY 12.—This was a rainy, disagreeable day, and the moschetoes were numerous, hungry, and extremely annoying, but we travelled, notwithstanding, at our usual speedy rate. Our course has been south, and the valley of the river was savanne and tamrack and cedar swamp, but generally narrow, about half a mile broad, with low ridges and a miserable growth of pine bordering it on both sides. The river has become very small and somewhat rapid; and we have encamped after making a portage of two miles round a chain of rapids. One of our Indians killed a deer this morning, and we saw many more during the day. This country is so very remote and dreary, that the Indians seldom visit it, and the deer are more abundant than about the river below; ducks are also very numerous in the savannes where there is wild rice. Journey 52 miles.

JULY 13.—We ascended the river in our canoes ten miles farther, to a little lake, (Usaw-way, or Perch lake,) about two miles long and half a mile broad; the river was very narrow and crooked, through a low, narrow meadow, and a little above this lake we left it; *seeing that we had now traced this smaller branch of the Mississippi into the very swamps and meadows, from the drainage of which it takes it rise.*

From here we set off, over land, in a southwest direction, to reach Lac La Biche, represented as the source of the larger branch. Our canoes and baggage being very light, all was transported at one load, one man carrying the canoe, and the other the baggage of each of the party. In this way we made a portage of six miles in four hours, and struck the lake, the object of our search, near the end of its southeastern bay. The first mile of the portage was through a tamrack swamp, and the remainder, excepting a little lake of 300 yards diameter, was over pine ridges of the poorest character imaginable. The soil was almost pure sand, and the pine was stinted and mostly of the *scrub* species, (pinus banksianus,) which, hung as it was with lichens, and no other growth, not even a bush or shrub, mixed with it, presented a picture of landscape more dismal and gloomy than any other part of this miserably poor country that we had seen. Not a bird or animal, scarce even a fly, was to be seen in the whole distance of this portage, and it would seem that no kind of animal life was adapted to so gloomy a region.

From these hills, which were seldom more than two or three hundred feet high, we came suddenly down to the lake, and we embarked and passed nearly through it to an Island, near its west end, where we remained one or two hours.

We were now sure that we had reached the *true source* of the great river, and a feeling of great satisfaction was manifested by all the party; Mr. Schoolcraft hoisted a flag on a high staff, on the Island, and left it flying.

Lac La Biche is about seven miles long, and from one to three broad, but is of an irregular shape, conforming to the bases of pine hills, which, for a great part of its circumference, rise abruptly from its shore. It is deep, and very clear and cold, and seemed to be well stocked with fish. Its shores show some boulders of primitive rock, but no rock in place, and are generally skirted near the water with bushes. The island, the only one of the lake, and which I have called Schoolcraft island, is one hundred and fifty yards long, fifty yards broad, and twenty or thirty feet elevated in its highest part; a little rocky in boulders, and grown over in pine, spruce, wild cherry, and elm.

There can be no doubt but that this is the *true source and fountain of the longest and largest branch of the Mississippi.* All our information that we had been able to collect on the way, from traders and Indians, pointed to it as such; and our principal Indian guide, Yellow Head, who has proved to us his close intelligence of the country, represents the same.—He has formerly hunted all around it, and says there is a little creek, too small for even our little canoes to ascend, emptying into the south bay of the lake, and having its source at the base of a chain of high hills, which we could see, not two miles off, and that this is the only stream of any description running into it. In fact, the whole country showed that there was no stream beyond, for the lake was shut in on all sides by pine hills, and the only opening through them was that by which it discharged itself. To the west we could see distinctly a range of almost mountains, covered with pine, which was undoubtedly the chain dividing us from the waters of Red river.

It will be seen from my map, that Lac La Biche is but little west of *south* from Cass lake, and almost due south from Lac Travers, which is a different position from that assigned to it on published maps, where it is invariably represented north of Cass lake. There is, however, a little stream, Turtle river, entering Cass lake from the north, in the route or traders to Turtle lake and Red lake, but it is a very small and insignificant stream, and is only forty five miles in length.

We left Lac La Biche, from its northern bay, having coasted nearly its whole circumference, and found the Mississippi, at its very egress from the lake, a respectable stream; its channel being twenty feet broad and two feet deep, and current five mile per hour. Its course was northwest and soon ran through a chain of high pine hills, where the channel contracted very much, and numerous rapids occurred of very great fall over boulders of primitive rock; the river running, for the distance, in a deep ravine.—We descended twenty five miles and encamped.

After this general view, the more complete picture of Mr. Schoolcraft will not come amiss.

A fog prevented our embarking until five o'clock in the morning, (13th) and it was then impossible to discern objects at a distance. We found the channel above the Naiwa, diminished to a clever brook, more decidedly marshy in the character of its shores, but not presenting in its plants or trees, any thing particularly to distinguish it from the contiguous lower parts of the stream. The water is still and pond-like. It presents some small areas of wild rice. It appears to be a favorite resort for the duck and teal, who frequently rose up before us, and were aroused again and again by our progress. An hour and a half diligently employed, brought us to the foot of Ossowa Lake. We halted a moment to survey it. It exhibits a broad border of aquatic plants, with somewhat blackish waters. Perch abound in it. It is the recipient of two brooks, and may be regarded as the source of this fork of the Mississippi. We were precisely twenty minutes in passing through it. We entered one of the brooks, the most southerly in position. It possessed no current, and was filled with broad leaved plants, and a kind of yellow pond-lily. We appeared to be involved in a morass, where it seemed equally impracticable to make the land, or proceed far by water. In this we were not mistaken; Oza Windib soon pushed his canoe into the weeds, and exclaimed, *Oma, mikunna,* (here is the portage.) A man who is called on for the first time, to debark, in such a place, will look about him to discover some dry spot to put his feet upon. No such spot however existed here. We stepped into rather warm pond water, with a miry bottom. After wading a hundred yards or more, the soil became firm, and we soon began to ascend a slight elevation, where the growth partakes more of the character of a forest. Traces of a path appeared here, and we suddenly entered an opening affording an eligible spot for landing. Here our baggage was prepared for the portage. The carbonaceous remains of former fires, the bones of birds, and scattered camp poles, proved it to be a spot which had previously been occupied by the Indians. The prevailing growth at this place, is spruce, white cedar, tamarack and grey pine. We here breakfasted.

Having followed out this branch of the Mississippi to its source, it may be observed, that its existence, as a separate river, has hitherto been unknown in our geography. None of the maps indicate the ultimate separation of the Mississippi, above Cass Lake, into two forks. Little surprize should therefore be manifested that the latitude of the head of this stream is found to be incorrect. It was not however to be expected that the inaccuracy should be so great as to place the actual source, an entire degree south of the supposed point. Such however is the conclusion established by present observations.

The portage from the east to the west branch of the river, is estimated to be six miles. Beginning in a marsh, it soon rises into a little elevation of white cedar wood, then plunges into the intricacies of a swamp matted with fallen trees, obscured with moss. From this, the path emerges upon dry land. It soon ascends an elevation of oceanic sand, having boulders, and bearing pines. There is then another descent, and another elevation. In short, the traveller now finds himself crossing a series of deluvial sand ridges, which form the height of land between the Mississippi Valley and Red river. This ridge is locally denominated Hauteur des Terres, where it is crossed in passing from Lac Plaie to Otertail Lake, from which point it proceeds northward, separating the tributaries of the River des Corbeau from those of Red River. It finally subtends both branches of the Mississippi, putting out a spur between the east and west fork, which intersects the portage, crosses the west or Itascan fork about the point of the Kakábionce, or Little Rock Falls, and joining the main ridge, passes northeastwardly of Lac Travers and Turtle Lake to Red Lake. It is, in fine, the table land between the waters of the Hudson's Bay and the Mexican Gulf. It also gives rise to the remotest tributaries of the river St. Louis, which, through Lake Superior and its connecting chain, may be considered as furnishing the head waters of the St. Lawrence. This table land is probably the highest in Northwestern America, in this longitude.

In crossing this highland, our Indian guide, Oza Windib, led the way, carrying one of the canoes, as his portion of the burden. The others followed, some bearing canoes, and others baggage. The whole party were arranged in Indian file, and marched rapidly a distance—then put down their burthens a few moments, and again pressed forward. Each of these stops is called a *posé* by the voyageurs, and is denominated Opugidjiwunon, or a place of putting down the burthen, by the Indians. Thirteen of these rests are deemed the length of the portage. The path is rather blind, and requires the precision of an Indian eye to detect it. Even the guide was sometimes at a loss, and went forward to explore. We passed a small lake, occupying a vale, about midway of the portage, in canoes. The route beyond it was more obstructed with underbrush. To avoid this, we waded through the margins of a couple of ponds, near which we observed old camp poles, indicating former journies by the Indians.

The weather was warm, and not favorable to much activity in bird or beast. We saw one or two species of the falco, and the common pigeon, which extends its migrations over the continent. Tracks of deer were numerous, but travelling without the precaution required in hunting, we had no opportunity of seeing this animal on the high grounds. It was observed in the valleys of the river, on both branches. Ripe strawberries were brought to me, by the men, at one of the resting places. I observed a very diminutive species of the raspberry, with fruit, on the moist grounds. Botanists would prabably deem the plants few, and destitute of much interest. Parasitic moss is very common to the forest trees, and it communicates a peculiar aspect to the grey pine, which is the prevailing growth on all the elevations.

To the geologist, the scene is one of interest.—The boulders of granite, and other primitive strata, occurring on the surface, remind him of the original position of these masses, in the system of nature and indicate revolutions affecting the earth's surface, which have widely changed both the postion and form of these solid materials. When the soil itself is examined, it adds further evidences of such changes. We may refer its sand to consolidated strata of this mineral which have been broken down by oceanic action, and distributed in the remarkable ridges and elevations, which now characterize the face of the country. In whatever light the subject is viewed, it seems difficult to resist the conclusion, that water has been the cause, under Providence, in effecting these changes, and that the highest grounds in this region, have been subjected to the peculiar influence which this element alone exerts in the work of attrition and deposition of strata, solid or diluvial. It might be interesting to inquire, in what manner this agent of change was withdrawn, and whether a current was created toward either of the cardinal points. It would aid this inquiry to observe, in which direction the debris and soils were deposited in the heaviest masses? How far granite boulders had been carried from their beds? And whether wood, bones, and other organic remains had been subjected to like removals? We think these accumulations are abundantly witnessed in casting the eye down the Mississippi valley, with a measured decrease in the size and weight of the pulverized masses, in proceeding from the head to the mouth of this river. It is thus evident, that the heaviest boulders are found on its upper branches, while they become rare in its central plains, and disappear altogether, long before its entrance into the deltas at its mouth. And this remark may be coupled with the accounts given by travellers of the bleak, and denuded, and sterile character of the northern rock formations.

But we have no leisure to devote to this investiga-

tion, and must proceed with the narrative that is before us. Every step we made in treading these sandy elevations, seemed to increase the ardor with which we were carried forward. The desire of reaching the actual source of a stream so celebrated as the Mississippi—a stream which La Salle had reached the mouth of, a century and a half (lacking a year) before, was perhaps predominant: and we followed our guide down the sides of the last elevation, with the expectation of momentarily reaching the goal of our journey. What had been long sought, at last appeared suddenly. On turning out of a thicket, into a small weedy opening, the cheering sight of a transparent body of water burst upon our view. It was Itasca Lake—the source of the Mississippi.

Itasca Lake, the *Lac la Biche* of the French, is, in every respect, a beautiful sheet of water, seven or eight miles in extent, lying among hills of diluvial formation, surmoun ted with pines, which fringe the distant horizon, and form an agreeable contrast with the greener foliage of its immediate shores.—Its greatest length, is from south-east to north-west, with a southern prolongation, or bay, which receives a brook. The waters are transparent and bright, and reflect a foliage produced by the elm, lynn, maple, and cherry, together with other species more abundant in northern latitudes. The lake itself is of irregular form, which will be best illustrated by the accompanying sketch. It has a single island, upon which we landed, after an hour's paddling from the spot of our arrival and embarkation. We found here, the forest trees above named growing promiscuously with the betula and spruce. The bones of fish and of tortoise, found at the locality of former Indian camp fires, indicate the existence of these species in the lake. We observed a deer, standing on the margin of the lake. And, here, as well as throughout the lakes of the region, found the duck, teal and loon, in possession of their favorite seclusions. Innumerable shells, (a species of small helix,) were driven up on the head of the island. Other parts of the lake yield small pieces of the unio, which were found strewing the bed of the outlet And it may be here remarked, that this shell exists, in the largest and heaviest species heretofore known, in the lower parts of this stream—the Mississippi having its origin here.

The outlet of Itasca Lake, is perhaps ten to twelve feet broad, with an apparent depth of twelve to eighteen inches. The discharge of water appears to be copious, compared to its inlet. Springs may, however, produce accessions which are not visible, and this is probable both from the geological character of the country, and the transparency and coolness of the water.

The height of this lake above the sea, is an object of geographical interest, which, in the absence of actual survey, it may subserve the purposes of useful inquiry, to estimate. From notes taken on the ascent, it cannot be short of one hundred and sixty feet above Cass Lake. Adding the estimate of 1330 feet, sub mitted in 1820, as the elevation of that lake, the Mississippi may be considered to originate at an altitude of 1490, say 1500 feet, above the Atlantic Its length, assuming former data as the basis, and computing it, through the Itascan, or west fork, may be placed at 3160 miles, one hundred and eighty-two of which, comprises an estimate of its length above Cass Lake. Its general course, in *ascending*, above the latter point, is north of west as far as Lac Travers. Then south to its primary forks which is continued, following up the east fork to Kubbakunna Lake, and for some distance further. It then varies a short distance north and northwest, then southwest and south, and finally southwest, to its main source in Ossowa Lake. The portage thence to Itasca Lake, is west southwest. Both these lakes appear to rise in springs, on the height of land. They are separated by about six miles of country. Their latitude, we had no means of accurately determining. From daily notes of the courses and distances, kept by Lieut. J. Allen, as indicated by a compass and watch, their position, is, however, shown to be *southwest*, and not, as heretofore supposed, *no rthwest* of Cass Lake.—They are, in fact, a little south of west from Leech Lake, which is placed, on our best maps, in forty-seven degrees sixteen minutes. The highest northing attained by the Mississippi, is on the great diluvial plateau, containing the contiguous waters of Lake La Salle, Marquette and Travers, which cannot vary more than a few minutes, from forty-eight degrees. These facts will explain the error of the elder geographical writers, who supposed that the parallel of forty-nine degrees would intersect the Mississippi. Its origin in the remote and unfrequented area of country between Leech Lake and Red river, probably an entire degree of latitude south of Turtle Lake, which still figures on some of our maps as its *source*, throws both the forks of this stream out of the usual route of the fur trade, and furnishes, perhaps, the best reason why its actual sources have remained so long enveloped in obscurity.

Such is the lonely and beautiful source whence the Father of Rivers derives his birth, Springing like a young warrior from the woods—with veins unpolluetd by one bad commingling current—overpowering and annihilating a hundred opposing others in his course—still, without change or a taintin h s character, until in fierce encounter with one rude and foulmouthed rival—powerful as himself—he vanquishes, indeed, but wears forever more a sullen stain upon his feature, and sweeps away a bloated conqueror, to hide his doubtful honors in the sea.

The fatigues and privations endured by the party in penetrating to this point, were such as never enter into the dreams of "Gentlemen who sit at home at ease." We have preferred, however, giving the glorious result of their labor to dwelling upon the anxious steps by which it was attended. We have elsewhere remarked, that more than an equal share of this exposure fell to the young officer who commanded the military escort of the expedition, and who, tho' eminently qualified by his attainments, his natural abilities and character to reap honor from such an expedition, is scarcely mentioned by his companion. It is now with extreme regret, that we find ourselves compelled, before closing this notice, to allude to an affair which places the conduct of Mr. Schoolcraft toward his young comrade in a light that calls for the severest reprehension. One cannot but admire the marked moderation with which Mr. Allen Speaks of the singular and unaccountable desertion described in the following extract from his journal:

July 29, (Sunday.)—Mr. Schoolcraft had made it a rule not to travel with his party, on this expedition, on Sunday, and, supposing he would observe the same on this day, I confidently expected to overtake him before night. I was particularly anxious to do so, inasmuch as I had now no *gum* for the repair of my canoes, and I knew he had an abundance; and I wished, moreover, to get, through his means, at the first Indian village, two Indians to steer my canoes; by which my men could be saved from much of the wading and consequent hardship and exposure, of the method of ascending rapids that the want of competent steersmen had forced me to adopt; and by which they were now so much exhausted, and bruised in their feet and legs, as scarce to be equal to the exertions still necessary, and required of them. I accordingly urged forward as much as possible, and got to the site of Mr. Schoolcraft's encampment in the afternoon, where I learned, by a note left for me by Dr. Houghton, that the whole party had left, two and a half hours before, with an intention on the part of Mr. S. not to wait for me any where on the route, but to proceed home with all possible speed, giving as a reason for this measure, that the river was falling, and any delay but increased the difficulty of ascending it. I was dissatisfied with this proceeding of Mr. S. and deemed it unwarrantable by the official relations in which we stood to each other, inasmuch as I was thereby deprived of the services of the surgeon and interpreter, to which I considered myself rightfully entitled within the intention of the department, so far as such services might be necessary for the safety of the detachment, and to enable me to execute my instructions. These gentlemen had been employed for the purposes of the expedition, and as the execution of certain of those purposes had been separately assigned to me, I had a right to expect that the means provided for their execution shoul l not be withheld from me by the power to whom they were entrusted by the department to control; but by this sudden and unadvised withdrawal of those means out of my reach, I was not only embarrassed in the performance of an appropriate duty, but placed in a situation of extreme inconvenience, and even danger, which could not have been anticipated or intended by the department in the project of the expedition. It is not to be supposed that the department would require soldiers to travel through such a country as this, and encounter the extraordinary exposure and danger incident to their transporting themselves, without some provision of medical aid; and still less could it be deemed practicable for a detachment of troops to effect a journey through an unknown, wild, inhospitable Indian country, without guides of any kind to direct, or an interpreter, through whose means to obtain guides or necessary geographical information. But such was my situation now; I had this route to travel, of which I neither knew the length or direction, the quantity or character of its difficulties, or the time and means that would be required to overcome them. For supposing that I was to travel it with Mr. Schoolcraft, who had *guides*, I had not made any useful inquiries respecting it. In this embarrassment, I would have turned back and sought another route home; but, from the number of rapids which I had already ascended, I supposed there could not be many more to the summit of the river: and that, consequently, it was as easy to go forward as back. and particularly as, with my present means, it was less difficult to ascend than descend rapids. Moreover, by the route of Prairie du Chien, I could not now hope to reach fort Brady for a long time, in which apprehensions, with the commanding officer there, for my safety, as he could not hear of me after the return of Mr. S., might, I supposed, lead to measures which a more speedy return by this route might avert. And again, Dr. Houghton informed me in his note that he would wait for me at La Pointe, in Lake Superior; that we might pursue a previous arrangement, by which he was to travel home with me, that we might make some further examinations along the lake; and, unless I called there for him, he could not, probably, get home this fall. These consideartions induced me to continue the route, bad as the prospect was of finding it.

But of Mr. Schoolcraft, it is subject of just complaint that he has separated himself from me at a time when I most depended on him, and when, knowing, as he did, the unfitness of my men for the sole management of canoes on this difficult route, he must have been fully aware of the great exposure and fatigue which I must encounter in the accomplishment of this journey without *his assistance*, which he had now withdrawn, but which it was in his power and was his duty to afford.

Had Mr. Schoolcraft told me at Fort Snelling that it would be best for me to perform the remainder of the trip alone, and on my own resources, I might there have secured sefficient resources, or, being relieved from the escort duty of protection to his party, I might have returned home by another and less difficult route, which I probably would have done. But by a strange interpretation or disregard of his official relation to the escort, he has led it, ignorant of such a contingency, into a situation of difficulty not compatible with its separate means of resistance, and there left it to encounter the difficulty as it best might.

I continued a few miles above Mr. Schoolcraft's encampment, and stopped for the night, having given up all hope and prospect of overtaking him. My men having been in rapids most of this day also, much worn out and discouraged; and my canoes leaked badly, and could not be repaired for want of gum.

August 3.—The river has become so low that we have to wade over all the rapids, *which seem to be interminable.* Many of them, to-day, were over shelving sandstone rock; the fragments of which, broken and strewed in the channel, have cut up my men's feet, and the bottoms of the canoes, horribly. Made about the same distance as yesterday.

August 4.—Passed a long expansion of the river, grown over with wild rice, on the east side of which is an Indian village, of seven or eight lodges, with gardens of potatoes, squashes, and corn, adjacent. This is Keppameppa's permanent village; but all the Indians were now absent, hunting or fishing.—Twelve or fifteen miles above this village, we came to another expansion, or narrow rice lake, five or six miles long, the upper end of which receives Ox river; the St. Croix coming in below Ox river, on the west side. From my ignorance of the route, I was near getting lost at this place, by following up the wrong river. A broad, plain channel, with a current all the way, leads up, through the rice, to the mouth of Ox river; but the St. Croix, which is here the smaller of the two rivers, comes in, as it were, on one side of the rice pond, and has its mouth, in a measure, concealed by the grass growing in it. Each canoe passed in succession to the mouth of the former river, without noticing the latter; but I had remarked, as I passed, an opening in the woods, as though a stream came in; and after entering the mouth of the wrong river, I went back, to be satisfied as to this appearance, and found the stream; but from its being smaller than the other, was still in doubt which to take, till I had followed it up a

short distance, to a rapid, where I observed, on a rock in the bottom, a little red spot, which on examination, proved to be red lead paint rubbed from Mr. S's. canoe, which had touched the rock. This little circumstance determined this to be the proper route, and saved me from the error of taking the other; which, If I had done, might have led to further error, and been attended with serious consequences; for, if I had been lost for many days in this poor country, till my provisions were exhausted, starvation would have been almost inevitable.

We do not know what excuse Mr. Schoolcraft proposes to himself for this unaccountable and inhumane desertion which is mentioned with so much mildness by his forgiving companion, but we do know that the rigid observance of the Sabbath among his men, which he takes so much pains to parade in his pages, does not weigh a feather with us when balanced against an act so un-Christian-like: an act which, even in that country, where life is certainly held a cheaper commodity than it is here, was regarded with indignation and dismay. The escape of Mr. Allen was almost a miracle: for he had not only, with the most inadequate means, to contend with the well-known difficulties of his situation—but unknown wholly to themselves—his little band were travelling through an enemy's country, and liable to be cut off at any moment. The Sauk and Fox war had broken out while the party were far in the wilderness, and scalps were in high request in their present neighborhood. Our view of this matter, however, will not prevent us from doing justice to some most valuable additions to our knowledge of Indian life in Mr. Schoolcraft's book when we again return to it, which we propose more than once to do. †

Naval Stories, by *William Legget*. 1 Vol. 18mo: New York, *Carvills*.—The Nautical Tales and Sketches, now for the first time collected in this little volume, have excited so much attention in the various ephemeral publications, where they have from time to time appeared, that we wonder at their not having been before embodied in a durable form. The reputation of their author, as one of our most vigorous and graphic writers in this kind of literature, will ensure their cordial reception in this new guise—nor will they, with many, need the recommendation conveyed by the following specimen of their contents. It is a thrilling description of *an encounter at sea*.

For more than an hour did the Active flee along in this way, like a wild horse foaming and stretching at his utmost speed, driven onward in the van of the tempest, and exposed to its fiercest wrath. At length, the first fury of the gale passed away, and the wind, though still raging tempestuously, swept over with less appalling force. The ocean, now, as if to revenge itself for its constrained inactivity, roused from its brief repose, and swelled into billows that rolled and chased each other with the wild glee of ransomed demons. Wave upon wave, in multitudinous confusion, came roaring in from astern; and their white crests, leaping, and sparkling, and hissing, formed a striking feature in the scene. The wind, fortunately, issued from the right point, and drove the Active towards her place of destination. The dun pall of clouds, which from the commencement of the gale had totally overspread the heavens, except in the quarter whence the blast proceeded, now began to give way, and a redish light shone out here and there in long horizontal streaks, like the glow of expiring coals between the bars of a furnace. Though the first dreadful violence of the storm was somewhat abated, it still raged with too much fierceness and power to admit of any relaxation of vigilance. The commander himself still retained the trumpet, and every officer stood in silence at his station, clinging to whatever might assist him to maintain his difficult footing.

"Light, oh!" cried the lookout on one of the catheads.

"Where away?" demanded the Captain.

"Dead ahead."

"What does it look like, and how far off?" shouted the captain, in a loud and earnest voice.

"Can see nothing now, sir; the glim is doused."

"Here, Mr. Burton," cried the commander, "take this night glass; jump aloft on the foreyard, sir, and see if you can make out any object ahead. Hurry up, hurry up, and let me hear from you immediately, sir! Lay aft to the braces! Forecastle, there! have hands by your staysail sheets on both sides! foreyard, there!"——

But before the captain had finished his hail, the voice of little Burton was heard, singing out, "sail oh!"

"What does she look like, and where away?"

"A large vessel lying to under bare poles—starboard your helm, sir, quick—hard a starboard, or you will fall aboard of her!"

This startling intelligence was hardly communicated before the vessel descried from aloft loomed suddenly into sight from deck, through the thick weather to leeward. Her dusk and shadowy form seemed to rise up from the ocean, so suddenly did it open to view, as the driving mist was scattered for a moment. She lay right athwart the Active's bows, and almost under her fore-foot—as it seemed while she pitched into the trough of an enormous sea—and the Active rode on the ridge of the succeeding wave, which curled above the chasm, as if to overwhelm the vessel beneath.

"Starboard your helm, quarter-master! hard a-starboard!" cried the commander of the Active, in a tone of startling energy.

"Starboard!" repeated the deep solemn voice of old Vangs, who stood on the quarter-neetings, his tall figure propped against the mizzen rigging, and his arm wreathed round the shroud.

"Jump to the braces, men!" continued the captain strenuously—"haul in your starboard braces, haul!—ease off your larboard! does she come to, quarter-master!—Fo'castle there! ease off your larboard staysail sheet—let all go, sir!"

These orders were promptly obeyed, but it was too late for them to avail. The wheel, in the hands of four stout and experienced seamen, was forced swiftly round, and the effect of the rudder was assisted by a pull of the starboard braces; but in such a gale, and under bare poles, the helm exerted but little power over the driving and ponderous mass.—She had headed off hardly a point from her course, when she was taken up by a prodigious surge, and borne onward with a fearful velocity. The catastrophe was now inevitable. In an instant the two ships fell together, their massive timbers crashing with the fatal force of the concussion. A wild shriek ascended from the deck of the stranger, and woman's shrill voice mingled with the sound. All was now confusion and uproar on board both vessels. The Active had struck the stranger broad on the bows, while the bowsprit of the latter, rushing in between the foremast and the starboard forerigging of the Active, had snapped her shrouds and stays, and torn up the bolts and chainplates, as if they had been thread and wire. Staggering back from the shock, she was carried to some distance by a refluent wave, which suddenly subsiding, she gave such a heavy lurch to port that the foremast—now wholly unsupported on the starboard side—snapped short off like a withered twig, and fell with a loud plash into the ocean.

"The foremast is gone by the board!" shouted the officer of the forecastle.

"My God!" exclaimed the captain, "and Charles Burton has gone with it! Fo'castle there! Did Charles Burton come down from the foreyard?"

"Burton! Burton! Burton!" called twenty voices, and "Burton!" was shouted loudly over the side; but there was no reply!

In the meanwhile another furious billow lifted the vessel on its crest, and the two ships closed again, like gladiators, faint and stunned, but still compelled to do battle. The bows of the stranger this time drove heavily against the bends of the Active just abaft her main-rigging, and her bowsprit darted quivering in over the bulwarks, as if it were the arrowy tongue of some huge sea monster. At this instant a wild sound of agony, between a shriek and groan, was heard in that direction, and those who turned to ascertain its cause saw, as the vessels again separated, a human body, swinging and writhing at the stranger's bowsprit head. The vessel heaved up into the moonlight, and showed the face of poor Vangs, the quarter-master, his back apparently crushed and broken, but his arms clasped round the spar, to which he appeared to cling with convulsive tenacity. The bowsprit had caught him on its end as it ran in over the Active's side, and driving against the mizzenmast, deprived the poor wretch of all power to rescue himself from the dreadful situation. While a hundred eyes were fastened in a gaze of horror on the impaled seaman, thus dangling over the boiling ocean, the strange ship again reeled forward, as if to renew the terrible encounter. But her motion was now slow and laboring. She was evidently settling by the head; she paused in mid career, gave a heavy drunken lurch to starboard, till her topmasts whipped against the rigging of her antagonist, then rising slowly on the ridge of the next wave, she plunged head foremost, and disappeared for ever.—One shriek of horror and despair rose through the storm—one wild delirious shriek! The waters swept over the drowning wretches, and hushed their gurgling cry. Then all was still!—all but the rush and whirl of waves as they were sucked into the vortex, and the voice of the storm which howled its wild dirge above the spot.

We have a score of Magazines upon our table, which, as they have been twice crowded out of our list of Saturday's notices, shall be duly taken care of during the week. †

[*From the Journal of Commerce.*]

Very late from Mexico.—The brig William, Capt. Martin, which arrived on Saturday in the very short passage of 16 days from Vera Cruz, brings papers from that city to July 2d, inclusive.

Almost the whole country has declared for the plan of Cuernavaca, or for other plans of similar import, i. e. for the overgrown power and innumerable abuses of the church, and against the reforms introduced by the last Congress. We are clearly of opinion that those reforms were too sweeping for the infancy of the nation's enlightenment, but the reaction which has now taken place, throws the country back nearly to the point where it stood when it first shook off the yoke of Spain. There is however no doubt of the complete success of the reaction. In addition to the States before mentioned which have fallen in with the plan of Cuernavaca, may be added Mexico, Jalisco and Morelia, besides innumerable cities and villages in every part of the Republic. Queretaro, which undertook to resist the new order of things, has been entered and garrisoned by a large body of government troops. Puebla was closely besieged, and may be considered as fallen. Thus far, no blood has been shed, of any consequence, and none probably will be. The revolution is virtually finished already.

A conducta arrived at Vera Cruz from Mexico on the 27th June.

Gen. Santa Anna had gone to Tacubaya for the benefit of his health.

The ecclesiastical establishments of the Federal District have volunteered a loan of $40,000 to the government at 6 per cent.

The Mexico Fenix, which espoused the cause of the dispersed Congress, has been discontinued.

The City Council of Vera Cruz, on the 20th June, celebrated an Acta, declaring, among other things, that laws passed relative to matters of religion, contrary to the Constitution, were null and void. In consequence of this pronunciamento, says the Censor of the 22d, "the political chief, the venerable parochial Curate, and the Secretary of the Chiefship of the department, accompanied by an immense and brilliant concourse of people last evening at 6 o'clock, opened the Churches and Convents of this city which had been suppressed by the unconstitutional decree of the Legislature of the State."

Vera Cruz, June 19.—Under the operation of the late laws, the people have seen the bishops and prebendaries persecuted,—the convents where they used to go to render their adoration to God and saints, shut up—the religious orders turned into the streets—the goods which they possessed with a legitimate title, confiscated, and applied to objects different from those for which they were presented—the temples seized by force, to be appropriated to profane uses,—and all this has made them think that the true meaning of the word Reform is Destruction. They have therefore become alarmed, and put themselves upon the defensive.

Mexico, June 13.—At Puebla the civic militia are deserting, and coming over in considerable parties to the forces of the supreme government. These forces are in possession of the out posts, and with 1500 men under the command of St. Bringas, will soon terminate the resistance of the factious without bloodshed. The scarcity of provisions in the town is already great, and as many families as can, are leaving it.

Mexico, June 18.—The dissidents at Puebala are driven nearly to the centre of the city, which will very soon be occupied by the troops of the Government. [There appears to have been very little loss of life.]

Vera Cruz, June 16.—The honorable Congress, which was called together for the 12th ult., has not convened, and probably will not; for of the Repro-

sentatives, besides those composing the Council of the Government, some are in Mexico, others in Puebla, which has declared against the supreme Government of the Union, others in the parts of the State, which have declared against the reforms that have been enacted.

Mexico, June 12.—Of the measures of Congress which have excited the greatest disapprobation, one is the confiscation of the property of the Duke de Monte Leone.

Tohica, June 7.—Generals Moctezuma and Cortazar have embraced the cause of religion and of the towns that have proclaimed it, thus disappointing the hopes of the enemies of order.

Mexico, June 15.—Only 20 days have elapsed since the pronunciamento of the town of Cuernavaca, and already almost the whole republic has fallen in with the plan.

Mexico, June 13.—An uninterrupted series of pronunciamentos in favor of the plan of Cuernavaca, shows in the clearest manner the state of public opinion relative to the laws of proscription and rapid reform.

Mexico, June 10.—The documents which we insert, show that the town of Acapulco, Costa Chica, and the whole South, is at the disposition of the Government.

Tuspla, May 30.—The Rev. Bishop left San Cristobal on the 23d inst. via Palengue, in compliance with the decree of the General Congress of April 22d, banishing him from the Republic.

Two days later from England.—By the *Virginian*, Capt. Harris, we have received our regular files of English papers to the 7th of June inclusive. They contain no news of moment.

A bill has been brought into Parliament to abolish imprisonment for debt, except in cases of fraud, and to amend the law of debtor and creditor: also a bill to render uniform the execution of wills, and of all deeds relating to personal property: and a bill to facilitate the enfranchisement of copyholds, and to bring gradually all lands in England and Wales under the same tenure of free and common soccage.

Mr. Robinson also brought forward a motion for an address to the Crown "respecting the rights of British subjects to prosecute the fisheries on the coast of Newfoundland, and in the bays, harbors, and rivers thereof." After a short discussion the hon. member withdrew his motion, on the understanding that Government would immediately take up the subject.

Speaking of the present condition of parties, the Times says—

It is clear from the deprecatory tone adopted by Lord Grey towards the close of his speech in reply to the Earl of Wicklow, and when speaking of possible conclusions between the House of Lords and Commons, that the noble Earl is conscious of holding the reigns of power no otherwise than at the will and pleasure of the Conservative party, and that whether in cases of local or general reforms—whether in that of the Warwick election Bill or of the promised measure for the reform of the Cnurch of Ireland—the determination of the Tory Lords is, that nothing shall be done which Ministers propose to do. Lord Grey and his party have already avowed their fear of the House of Lords, and the propriety of yielding to their wishes. The House will give the Ministers plenty of opportunities of Submission, but is this a position for any Minister with a heart in his body to stand on?

Mr. Robert Grant is, we believe it is now fixed, to proceed some time hence to the East Indies as Governor of Bombay, in the room of the Earl of Clare, who comes home

Mr. Grant is Judge Advocate, and one of the Members for Finsbury. We have not heard whether there be any foundation for the rumoured appointment of the Earl of Randor to the Post Office.—[Courier.]

We mentioned yesterday the arrival of Dr. Bowring from Paris with the Ordonnance. By that we are pleased to see that the prohibition has been removed against importing cotton twist, which is henceforth to be admitted, paying a duty of from seven to eight francs the kilogramme. This change will take place on Sept. 1st. Cachemere shawls manufactured out of Europe are to be admitted, paying a duty of twenty per cent. on their value. Lace made of cotton is to be admitted paying the same duty as lace made of thread, namely, five per cent. on the value. Iron cables are among the things admitted paying the same duty as iron in bars. Watches, Russia leather, rum, are also among the articles now admitted into France on the payment of duties. Various articles, such as raw and dyed silk, skins, &c., are also to be permitted to be exported on the payment of certain duties. The tonnage duties on British vessels is reduced from 3fr. 75c. to 1fr. This is the beginning of a more liberal commercial intercourse between the two countries, which we hope to see much extended.

[*From the London Times, June 7.*]

We have received, by express, the Paris papers of Thursday. The *Moniteur* states, that the French Government had received all the ratifications of the quadripartite treaty signed in London on the 22d of April. The *Journal des Debats* gives a summary of last Monday's proceedings in the House of Commons, taken from the *Times* of Tuesday, which had been received at the office of that paper from London, by express. The anxiety in the political circles in Paris, and the Bourse, about the result of the debate on Mr. Ward's motion, appears to have been very great on Monday, and had given rise to many rumors on that subject, some of which had affected the prices of the funds. The news from England, and from Portugal through Englsnd, had, as might have been expected, occasioned an unusual bustle at the Bourse on Thursday. The hofders of Miguelite scrip had in vain exerted themselves to get rid of their blank paper at any price. Great efforts were used on the other hand, to persuade them that the Miguelite loan will be acknowledged by the Queen's Government. Some of the papers publish an official account, by General Voirol, commander *ad interim* at Algiers, of an attack made by a detachment of French troops, on the tribe of the Hadjoutes, in consequence of repeated depredations committed by the latter on the Beni Khalil, a tribe who are in alliance with the French. The Hadjoutes were defeated and dispersed, and their goods and cattle taken and made over to the Beni Khalil. These papers have no foreign news of any importance besides that which relates to England and Portugal.

The *Monsteur Algérine* of the 24th ult. contains the following order of the day of Lieutenant-General Voirol:—"The Lieutenant General commanding, *ad interim*, Corps of Occupation of Algiers, makes known to the army a new exploit of the brave garrison of Boujela. On the 29th of April, they Kabyles having advanced to attack our working partiess on the side of the plain, the superior officer ordered the squadron of the 3d Regiment of Chasseurs of Africa to march againct them, supported by several companies of Zoares. These movements, effected with great promptitude, were attended with complete success. The Kabyles were overtaken and massacred by the cavalry. The few who escaped from them fell by the balls and bayonets of the Zoares."

A letter from Algiers has the following:—"When I acquainted you with the treaty conducted between Abdol Kader and General Desmichels, I warned you against considering it as a guarantee for the perfect tranquility of the natives. My apprehensions have just been realized by the necessity for driving back the Hadjoutes to the center of their tribe. About 300 horsemen of the plain joined our cavalry, but they did not act with great energy, which must be attributed to the uncertainty in which the natives are kept with regard to our remaining in Africa.—We killed 60 of the enemy, and burnt one Douar.—On our side, we had five men more or less dangerously wounded."

Smuggling.—A novel attempt at smuggling was lately detected in France. A waggon with five horses, laden with enormous masses of stone, was stopped while entering the town of Lille, and upon breaking some of the stone there were found to have been hollowed, and filled with cotton twist and English net. The waggon was conducted to the Custom-house, and the driver sent to prison. It appears the waggon and horses had been hired for this expedition, and that the owner was a total stranger to the fraud.

Later from Europe.—By the *Caledonia* from Liverpool, London papers of 16th June are received.

The pretender to the Spanish throne, *Don Carlos*, had arrived at Portsmouth Roads, on board the British line-of-battle-ship *Donegal*. He had not landed, as it was not yet determined what disposition was to be made of him.

As the Donegal left Lisbon, she spoke the British frigate Stag, going into Cascaes bay for provisions, and having on board Don Miguel and his suit, with whom, after victualling, she was to proceed to Genoa.

Thus the two disturbers of the Spanish and Portuguese Peninsula being disposed of, the Governments of the two countries would be more at leisure to turn their attention to the needful reforms. A commencement, it will be seen—so far as decrees go—had been made in Portugal.

A Paris paper, having published a long article to prove that though war might decide political, it could not and should not financial questions, and hence argued that the loans contracted in 1833 for *Don Miguel*, must be respected and paid by *Donna Maria's* government—the Chevalier de Lima, Portuguese Minister in Paris, published an answer, in which, referring to a decree issued by the Regency in the name of Donna Maria, in 1830, declaring that no loans raised by *Don Miguel* would be respected by the Portuguese nation, he affirms that nothing had occurred to alter the decision, and that assuredly *Donna Maria* would not re-imburse a loan, of which the proceeds had been spent in resisting her legitimate authority.

Spain had succeeded, it is said, in negotiating a small loan with the house of *Rothschild*; upon which occasion *le premier baron Juif*, as the great banker is called by the Paris wits, visited London, in order to have the cooperation of the English capitalists, in putting the finances of Spain upon a proper footing.

Parliament was in session, and mainly occupied about the Poor laws—which the Times complains absorb a time that might be more usefully given to the *Tithe bills*, and the bill for *the relief* of Dissenters.

[*From the London Times of June 16.*]

The private letters by the Donegal frigate, which left Lisbon on the 2d instant, with Don Carlos on board, are highly satisfactory in regard to the state of Portugal. A decree, it appears has been issued, convoking the Cortes of that country for the 15th of August; another for suppressing all the orders of friars, and applying the revenues of the monasteries to the service of the State; and a third for depriving the Douro Company of all its exclusive privileges. Among the measures for the formation of a representative system of government in Portugal, is a decree for excluding from the Upper House all those noblemen who have acknowledged the legitimacy of Miguel. Less danger seems to be apprehended now that the convocation of the Cortes has taken place, from the consequenses of political intrigue in Portugal, and it is hoped, even with respect to the most turbulent and enterprizing of the rival commanders, that all will now settle down quietly.

Paris, *Saturday 4 o'clock P. M.*—A courier arrived yesterday from Madrid, bearer of despatches of the 7th inst. for the French Government, and of the Madrid Gazette up to that date. The latter has a long decree of the Regent, regulating the liberty of the press. It appears by despatches, that some serious riots occurred on the night of the 4th or 5th, at the principal theatre, arising from the discontent expressed there by some part of the audience in consequence of what they chose to consider the lenient way in which Don Carlos and his pretensions had been disposed of. A strong military force was called into the theatre, but it was not without great difficulty that something like order was at length restored. The disturbance was entirely confined to the inside of the theatre. Tranquillity remained uninterrupted out of doors up to the departure of the courier.

The Journal de Smyrne of the 10th ult. states, after accounts from Samos of the 4th, that a great part of the population were looking anxiously for the arrival of the squadron sent out by the Porte, and were prepared to submit the instant it arrived. Logothett had lost his influence, and had retired with a few followers to the fortress of Tigani, to the South of Vathi, whence he would effect his escape as soon as the squadron arrived.

The Austrian Observer of the 4th inst. has the following of the 20th ult. from Constantinople—"We learn from Smyrna that the squadron under the command of Hassan Bey, composed of one frigate, two sloops, four brigs, two schooners, and five cutters, arrived off Samos on the 5th, and that a Turkish officer had landed to demand the submission of the inhabitants. It was generally hoped that it would

not be necessary to resort to extreme measures, and that submission would be made without resistance.

A letter dated Tripoli, April 25, contains the following:—"Mehemet, chief of the rebels, and nephew of Ali Pacha, being without sufficient money to purchase a supply of ammunition, and being consequently unable to carry on the civil war he has raised with the view of obtaining the supreme power, is engaged in contriving means of flight, in order to escape the punishment which he knows will be inevitable if he falls into the hands of his legitimate Sovereign, Ali Pacha. All his followers are equally discouraged."

It is matter of complaint in various English papers and periodicals, that the Lord Chancellor, with his "fiery habits of debate, and his love of victory in discussion," lowers the tone of habitual self-command and dignified restraint which heretofore characterized the proceedings of the House of Lords.

Among the recent deaths in England, is that of *Rudolph Ackerman*, well known, even in this country, as the publisher of various works of taste. He was a Saxon by birth, emigrated to London, where he followed for a time the trade to which he was bred, of a coach-builder, and carriage-draftsman. By this latter branch, he was brought into connexion with artists, and thence was led to commence business as a print-seller. He was a munificent publisher.

A panorama of New York was about to be exhibited in London, at the last dates; that of the "Falls of Niagara" attracted crowds. Among the shows of that city, we observe one advertised as "The Breathing Napoleon. It is thus described:

SUMMARY.

Speck of another Indian War.—The National Gazette of last evening has the following paragraph.

Letters have been received in this city from General Leavensworth's head quarters on the south-western frontier, near the Arkansas river, dated 17th June. This portion of that fine command has the prospect, it would seem, of an active campaign. The Pawnees will make peace when *compelled to do so*. We give an extract.

"The dragoons are crossing and we have thus commenced the campaign. Since the 1st of May, 300 miles of road have been completed. The dragoons are moving upon it to make a peace with the Pawness. We expect to find them about 6 or 700 miles from here, and will have a peace with them, if we have to fight for it. They are killing our citizens daily, and robbing every one they can find."

A wharf at the north part of the city of Boston, on which nearly 800 tons of coal and some lumber were piled, gave way on Tuesday evening, and with all its superincumbent load, slid into the water—which is about 17 feet deep—so that the unfortunate owner of the coal will lose it wholly.

The public honors which were paid in Philadelphia on Tuesday to the memory of Lafayette, says the National Gazette, drew a large part of the city population into the streets, and a considerable number of spectators from the country. Many of the shops were closed, and business was generally suspended during some hours. No American city could furnish a Procession of a more imposing character in regard to the appearance and bearing of the men."

Congress appropriated, at its late session, *ten thousand dollars* as prize money to the officers and crew of the private armed brig *General Armstrong*, or to their legal representatives.

Lebanon Springs.—A new Post-Office is established *at the Springs*, named "Columbia Hall," Columbia county, N. Y.—Henry Hull, Postmaster.

Consecration.—On the 12th of July, the new and elegant edifice erected for the accommodation of the congregation of Christ Church, Middletown, Connecticut, under the pastoral care of the Rev. Smith Pyne, formerly of New York, was consecrated to the worship of Almighty God, by the Right Rev. Bishop Brownell.—[Churchman.]

Packet Ship Independence.—Another new and magnificent ship has just been added to the Liverpool line of *Grinell, Minturn & Co.* We had the pleasure of passing an hour on board yesterday, and were truly gratified in examining so fine a vessel, so complete in all her parts, and so admirably adapted for the purpose of carrying numerous passengers, both in the cabin and in the steerage; and of stowing a large cargo without sacrificing the qualities of a fast sailer.

The *Independence*, built by Smith & Demon, and commanded by Captain Nye, is of the burthen of 730 tons, the largest merchant ship but one probably—the Washington of this port—in the United States; and yet when launched she will not, it is calculated, draw more than 14 feet water. Her extreme length is 141 feet, and her beam 34. Her deck, save in its shear, is like that of a frigate. The arrangement of the quarter deck is excellent: without being lumbered, it has every convenience for keeping the officer of the watch and the man at the wheel from unnecessary exposure; combined with an ice house capable of stowing two tons of ice, and with other modern improvements. The cabin, of great length and height, has 15 or 18 double state rooms, separated from the dining-room by partitions of curled and birdseye maple and satin wood of unsurpassed beauty. The polish given to these woods exceeds any thing we have before seen; and this polish, we were assured, is in no wise affected by the damp sea air. The polishers were Messrs. Stackhouse & Devereux. The joiner's work is by Mr. Lattou. Among many comforts in the state rooms is a spirit lamp, so hung as to preserve always its vertical position. The ladies cabin, amidships, is most comfortably and tastefully furnished. Altogether, it is very tempting, certainly, to think that for a comparatively small sum, and with the certainty of good treatment from her gentlemanly commander, and of a passage much shorter than was made before the packet lines of this city were established—one might just step on board such a magnificent floating palace as this—make a tour in Europe, and be back in time to vote against the perish credit perish commerce candidates in November. The hard fates forbid us such enjoyment, but we do not the less say, "God speed" to the gallant ship and all who may "go down to the sea" in her.

Pennsylvania, too, it seems, from the annexed paragraph, may add gold to her more valuable products of iron, &c.

Gold Region of Pennsylvania.—It is stated in the Lancaster Journal, that veins of gold having large deposites, have been found in that country, which are thought to be as rich as any mine in the South. With her Iron and Coal, her veins of Gold, and above all, her hardy and industrious population, the Key stone State must ever continue to be a great and powerful commonwealth.

Shipwreck.——Yesterday afternoon, says the Charleston Courier of the 17th inst., the French brig Edward Eulalie, Capt. B. Frebourg, arrived off the bar in 23 days from Laguna. The E. was bound to Havre, with a cargo of dyewood. The first night out, in a gale, sprung the foremast and both lower yards, which caused them to make for this port to refit. At 5 o'clock yesterday afternoon spoke one of our pilot boats. One of the pilots from her came on board and inquired her draft of water—was informed she drew 12 feet 4 inches. He stated to the Captain he could not take charge of her in consequence of his branch being for less water, but directed him to another boat then near by, on board of which there was a full branch pilot. Capt. F. bore away and spoke him—requested him to come on board, which he refused to do, saying—there is not water enough on the bar now. I will come tomorrow and bring you in. At half past 1 o'clock this morning, while lying off and on, going in stays, struck on the North Breakers, beat over into water, and sunk. They had not time to save any thing, being indebted to the pilots of the Cora and Georgia, (who took them off the wreck,) for a sufficiency of clothing to cover them.

Mr. Edward Everett has consented, at the request of the young men of Boston, to deliver an oration on the death of *Lafayette*.

The New York University.—The following were the subjects of the orations delivered at the Commencement of the University on Wednesday last.—These exercises were followed by the conferring of degrees on the orators, who composed the senior class.

1. "Quo didicisse
Nisi rupto jecore exierit caprificus."
2. Sympathetic emotion of virtue, R. R. Crosby, of this city.
3. Influence of fictitious writings, Mathew V. B. Fowler, Newburgh, N. Y.
4. Natural evil not inconsistent with divine benevolence, William R. Gordon, New York city.
6. Decision of Character, Washington Judah, New York city.
6. Discovery of Truth, Samuel Kellogg, New York city.
7. The harmony of intellectual and moral cultivation, A. H. Lambett, South Reading, Mass.
8. Popular education the best safeguard for free institutions, Wm. McMurray, jr. New York city.
9. Females of the American Revolution, Cornelius Matthews, New York city.

Military.—At an election held in the Second Regiment New York State Artillery on the 17th inst., Lieut. Col. *George W. Heelas*, was unanimously elected Colonel, vice *Samuel J. Hunt*, Esq., elected Brigadier General.

Brooklyn.—The Common Council have purchased two acres of ground situated at the junction of Fulton and Joralamon streets, opposite to Duflon's tavern, as the site for their City Hall, and for which they have given fifty thousand dollars.

Something new in the way of Amusement is promised by Mr. Robertson, the æronaut, in an exhibition to be opened by him at Euterpean Hall. It promises to be singularly attractive, but not a word is said of its nature or form.

M. Poultney, President of the Bank of Maryland at the time of its failure, is under indictment for alleged dishonesty in administering the concerns of that bank.

☞ We learn from Mr. J. S. Wilson, from Little Egg Harbor, that the British ship Henry Grattan, 50 days from Londonderry, bound to Philadelphia, with whiskey, 200 tons of coal, and 180 passengers, ran ashore on Long Beach, Little Egg Harbor, on the 19th inst., and a very heavy sea running at the time, the ship bilged. Shortly after grounding, the Captain succeeded in getting ashore for assistance: the mate had her masts cut away, to keep the vessel from rolling. On Sunday, the 20th, the Wreckmaster succeeded in landing all the passengers and crew safe on the beach. The passengers are in great distress. One of the crew was badly hurt by the falling of the mast. The ship and cargo is a total loss. Sails and rigging saved in a damaged state. Mr. Wilson further states, that the Mate with the Captain were below: took the ship's boat with 46 passengers, he states, from the ship, about 6 o'clock on Saturday, without any oars, rudder or sails, for the beach, the current set them in and over the breakers, and it was supposed, at Eggharbour, all hands would be lost. The mate got four of the passengers to stand up on the seats and hold up a blanket for a sail. The wind blowing on the beach, they went through all the breakers, and succeeded in landing on Tucker's beach at 1 o'clock on Saturday night, all safe.

The report of Cholera at *Montreal*, is narrowed down upon the authority of a gentleman who left that city on Saturday last.

"He says that eight or ten deaths had occurred among the emigrants under the sheds provided for them, which was not at all to be wondered at. Two or three citizens also died suddenly of Cholera morbus, or perhaps of Asiatic Cholera, yet there was nothing to warrant the alarm which appeared to be felt along the road, and which seems to be springing up in this city."

The Cincinnati Gazette of 12th inst. makes no allusion to the existence of Cholera in that town; but in the weekly list of deaths for the week ending 9th inst., *six* out of *forty-three* deaths, are reported as by Cholera.]

Report of the Board of Visiters to the Military Academy.

WEST POINT, N. Y., JUNE 17, 1834.

To the Secretary of War :—Sir: In compliance with your request, the undersigned have attended, as a Board of Visiters during the general examination, at the United States Military Academy, just concluded, and have "directed their inquiries to a full and free investigation in regard to the course of instruction, both military and scientific, and to the internal police, discipline, and fiscal concerns of the institution." That these several objects of inquiry might be attended to as thoroughly and successfully as possible, the Board, at its organization, referred them to separate committees, who have presented full reports with regard to them, accompanied by some suggestions for the improvement of the institution. Copies of these reports are forwarded to you, and the Board take the liberty of referring you to them for details, while they confine their joint report to a general and brief view of the present condition of the Academy.

The fidelity of the Professors, and the assiduity and proficiency of their pupils, were tested by an examination, on the several subjects, extending over eleven days, and continued for each day eight hours.

The sciences not strictly professional, included in these examinations, were mathematics, taught here from the elements of arithmetic to the profound theorems of the integral calculus—natural philosophy, including mechanics and astronomy—chemistry, in connection with mineralogy and geology—and, lastly, rhetoric, and moral and political science.

The subjects of professional study are civil and military engineering, and infantry and artillery tactics, with the last of which are connected ballistics and pryotechny.

A part of the first two years is devoted to the study of the French language, with which a competent acquaintance is required of the Cadet.

Lastly, great attention is very properly paid, in this Academy, to the art of drawing, of which the practical applications are so frequent and important in the military profession.

The subjects combined, certainly constitute an excellent preparatory education for officers of the army, and the examinations proved that they were faithfully and skilfully taught. Marked inequalities were indeed observed in the proficiency of the Cadets, and defects remain to be corrected in the organization of some of the departments, but still the exhibition was, on the whole, highly satisfactory and gratifying.

Frequent opportunities were presented to the Board of witnessing the practical skill of the corps in infantry and artillery exercises, and their fine and soldier-like appearance in the ranks, and the accuracy with which they executed their various evolutions, proved that this essential part of the duties of a Military Academy was sedulously attended to by both officers and cadets.

The discipline of the institution was carefully examined in its various bearings, and the Board have reason to think that it is in an excellent state. The laws seem to be executed with a stern regard to the good of the service, yet with a kind and paternal feeling, and the officers and professors are believed to be generally both beloved and respected.

The internal police of the institution was found to be carefully attended to. The rooms in the barracks, occupied by the cadets, exhibited a gratifying appearance of neatness and order, while, at the same time, they give rise to regret, on account of the inadequate accommodations which they offer. The mess table is well supplied with plain, but good and wholesome food. In the event of sickness, which the Board are happy to find has been lately of rare occurrence, suitable and comfortable accommodations are provided at the hospital, with the best medical attendance.

The Board directed an inquiry to be instituted, with as much minuteness as circumstances would admit, into the fiscal concerns of the institution. The result, which will be found fully detailed in one of the reports sent herewith, is, that the accounts are kept in a correct and satisfactory manner—that the expenditures are made in accordance with the appropriations—and that a proper attention is paid to economy in the expenses of every kind. To prevent extravagance in the cadets, there is a regulation which prohibits to them the possession or use of money, or expenditure of it, except with the consent of the superintendent, who stands, with regard to them, in the place of a parent, and who, it is believed, exercises his authority with enlightened discretion.

The whole investigation of the Board, led them to the conclusion that the Military Academy is a most valuable and essential part of the army establishment of the United States; that, at a cost so low as not exceeding that of a second rate man-of-war, it prepares, and can spread over the whole country, officers instructed and capable of giving instruction in the military art; and thus, without the danger arising to liberty from large standing armies in time of peace, enables the Government to fulfil the duty which the Constitution so solemnly enjoins, of "providing for the common defence," and lastly, that if our young citizens were commissioned in the army as lieutenants, in the first instance, as they must be if this institution be abolished, they could not obtain in four years, even the same military knowledge as the Cadets, while their probation and education would be far more expensive to the country.

(Signed) G. VAN SCHOOHOVEN, President,
ALVIN BRONSON,
JAMES HOOKER,
CHAS. B. PENROSE,
H. G. COMINGE,
JNO. T. ANDERSON,
R M. PATTERSON,
ACHILLE MURAT,
WM. P. DUVAL,
WRIGHT C. STANLEY,
P. LINDSLEY,
J. L. SMITH, Captain Corps of Engineers,
JAMES LATIMER, Jr.
T. B. DALLAS, Secretary.

The undersigned freely subscribe the within report, without expressing an opinion with regard to the last paragraph.

(Signed) WM. SMITH,
J. W. SCOTT.

HEAD QUARTERS OF THE ARMY,
Adjutant General's Office,
WASHINGTON, JULY 9, 1834.

1.—Promotions and Appointments in the Army, by the President of the United States, by and with the advice and consent of the Senate, since the publication of the official Register for 1834.

1.—PROMOTIONS.

Regiment of Dragoons.

Brevet Second Lieutenant William Eustis, to be Second Lieutenant, 17th March, 1834, vice Bradford, deceased, (brevet 1st July, 1830.)

Brevet Second Lieutenant George W. M'Clure, to be Second Lieutenant, 31st May, 1834, vice Clyman, resigned, (brevet 1st July, 1830.)

First Regiment of Artillery.

First Lieutenant Joshua Howard, to be Captain, 6th March, 1834, vice Patrick, deceased.

Second Lieutenant Ebenezer S. Sibley, to be First Lieutenant, 6th March, 1834, vice Howard, promoted.

Second Lieutenant Wm. Maynadier, to be First Lieutenant, 31st May, 1834, vice Tyler, resigned.

Brevet Second Lieutenant David B. Harris, to be Second Lieutenant 6th March, 1834, vice Sibley, promoted, (brevet 1st July, 1833.)

Brevet Second Lieutenant Erastus A. Capron, to be Second Lieutenant, 31st May, 1834, vice Maynadier, promoted, (brevet 1st July, 1833.)

Second Regiment of Artillery.

Second Lieutenant John B. Grayson, to be First Lieutenant, 30th April, 1834, vice Fowler, deceased.

Brevet Second Lieutenant Ward B. Burnett, to be Second Lieutenant, 1st April, 1834, vice Cocke, resigned, (brevet 1st July, 1832.)

Brevet Second Lieutenant Theophilus F. J. Wilkinson, to be Second Lieutenant, 30th April, 1334, vice Grayson, promoted, (brevet 1st July, 1832.)

Second Regiment of Infantry.

Brevet Second Lieutenant Elbridge G. Eastman, to be Second Lieutenant, 4th March, 1833, vice Simonton, appointed First Lieutenant of the Regiment of Dragoons, (brevet 1st July, 1831.)

Third Regiment of Infantry.

Second Lieutenant Edwin B. Babbitt, to be First Lieutenant, 31st March, 1834, vice Archer, resigned.

Brevet Second Lieutenant William O. Kello, to be Second Lieutenant, 11th January, 1834, vice Cobb, deceased, (brevet 1st July, 1832.)

Brevet Second Lieutenant Henry Swartwout, to be Second Lieutenant, 31st March, 1834, vice Babbitt, promoted, (brevet 1st July, 1832.)

Fourth Regiment of Infantry.

Brevet Second Lieutenant Frederick Wilkinson, to be Second Lieut., 18th February, 1834, vice Ritner, deceased, (brevet 1st July, 1831.)

Brevet Second Lieutenant William W. S. Bliss, to be Second Lieut., 31st March, 1834, vice McKean, resigned, (brevet 1st July, 1833.)

Sixth Regiment of Infantry.

Brevet Second Lieutenant James S. Williams, to be Second Lieutenant, 31st May, 1824, vice Johnston, resigned, (brevet 1st July, 1831.)

Seventh Regiment of Infantry.

First Lieutenant Francis Lee, to be Captain, 31st May, 1834, vice Bonneville, dropped.

Second Lieutenant Gabriel J. Rains, to be First Lieutenant, 28th January, 1834, vice Williams, appointed Assistant Topographical Engineer.

Second Lieutenant Stephen W. Moore, to be First Lieutenant, 31st May, 1834, vice Lee, promoted.

Brevet Second Lieutenant Roger S. Dix, to be Second Lieutenant, 28th January, 1834, vice Rains, promoted, (brevet 1st July, 1832.)

Brevet Second Lieutenant Richard C. Gattin, to be Second Lieutenant, 31s May, 1834, Vice Moore promoted, (brevet 1st July, 1832.)

2—*Promotions by Brevet, conferred for ten years' service in one grade; or for faithful and meritorious service.*

Brigadier Generals by Brevet.

Colonel Duncan L. Clinch, 4th Regiment of Infantry, to take rank the 20th April, 1829.

Colonel Matthew Arbuckle, 7th Regiment of Infantry, to take rank 16th March, 1830.

Colonel James House, 1st Regiment of Artillery, to take rank 8th May, 1832.

Colonel Roger Jones, Adjutant General, to take rank 7th June, 1832.

Bvt. Colonel Abram Eustis, 4th Regiment of Artillery, 30th June, 1834.

Colonel Nathan Towson, Paymaster-General, 30th June, 1834.

Colonels by Brevet.

Col. Zach. Taylor, 1st Regiment of Infantry, to take rank 20th April, 1829.

Lt. Col. James B. Many, 7th Regiment of Infantry, to take rank 1st June, 1831.

Lieutenant Colonels by Brevet.

Major Henry Stanton, Quarter Master, to take rank 13th May, 1830.

Major R. E. DeRussey, Corps of Engineers, for faithful service and meritorious conduct,—30th June, 1834.

Bvt. Major Henry Whiting, 1st Regiment of Artillery, for faithful and meritorious services;—30th June, 1834.

Majors by Brevet.

Maj. Trueman Cross, Q. M. and Capt. 7th Reg't. of Inf'ry, to take rank 16th June, 1828.

Captain Thomas F. Hunt, 5th Regiment of Infantry, to take rank 16th June, 1828.

Captain Waddy V. Cobbs, 2d Regiment of Infantry, to take rank 31st March, 1829.

Captain Gustavus Loomis, 1st Regiment of Infantry, to take rank 7th April, 1829.

Captain Henry Wilson, 4th Regiment of Artillery, to take rank 20th April, 1829.

Captain Thomas F. Smith, 1st Regiment of Infantry, to take rank 25th April, 1829.

Captain Richard M. Sands, 4th Regiment of Infantry, to take rank 30th April, 1829.

Captain Wm. Hoffman, 2d Regiment of Infantry, to take rank 1st May, 1829.

Major R. B. Mason, Regiment of Dragoons, to take rank 31st July, 1829.

Captain Joseph S. Nelson, 3d Regiment of Infantry, to take rank 13th August, 1829.

Captain Fabius Whiting, 1st Regiment of Artillery, to take rank 10th Septtember, 1829.

Captain Greenleaf Dearborn, 2d Regiment of Infantry, to take rank 30th September, 1829.

Captain Felix Ansart, 3d Regiment of Artillery, to take rank 28th Nov. 1829.

Captain Thomas Stanford, 2d Regiment of Infantry, to take rank 1st March, 1830.

Captain Thos. C. Legate, 2d Regiment of Artillery, to take rank 13th May, 1830.

Captain John L. Smith, Corps of Engineers, to take rank 29th August, 1830.

Captain Joseph Plympton, 5th Regiment of Infantry, to take rank 1st June, 1831.

Captain Wm. G. Belknap, 5th Regiment of Infantry, to take rank 1st Feb. 1832.

Captain De Lafayette Wilcox, 5th Regiment of Infantry, to take rank 1st April, 1832.

Captain Levi Whiting, 4th Regiment of Artillery, to take rank 21st May, 1832.

Captain Isaac Clark, 6th Regiment of Infantry, to take rank 27th August, 1832.

Captain Æneas Mackay, 3d Regiment of Artillery, to take rank 31st December, 1832.

Captain Benj. A. Boynton, 2nd Regiment of Infantry, to take rank 8th January, 1833.

Captain Owen Ransom, 2d Regiment of Infantry, to take rank 25th January, 1833.

Brevet Major William G. McNeil, Top. Engineer, to take rank 27th January, 1833.

Captain Wm. L. McClintock, 3d Regiment of Artillery, to take rank 11th August 1833.

Captain John L. Gardner, 4th Regiment of Artillery, to take rank 1st November, 1833.

Captain Henry Saunders, 1st Regiment of Artillery, to take rank 4th November, 1833.

Captain N. Baden, 2d Regiment of Artillery, to take rank 1st April, 1834.

Captain William W. Lear, 4th Regiment of Infantry, to take rank 1st May, 1834.

Captain Nathaniel Clark, 5th Regiment of Infantry, to take rank 29th June, 1834.

Captain George Blaney, Corps of Engineers, to take rank 30th June, 1834.

Captains by Brevet.

Captain Jac. Schmuck, 4th Regiment of Artillery, to take rank 25th July, 1824.

Captain Richard Bache, of Ordnance, to take rank 15th June, 1827.

First Lieut. Thos. J. Leslie, Corps of Engineers, to take rank 31st March, 1829.

Captain Seth Johnson, 2d Regiment of Infantry, to take rank 1st May, 1829.

First Lieut. Henry S. Mallory, 2d Regiment of Artillery, to take rank 31st May, 1829.

Captain Wm. M. Graham, 4th Regiment of Infantry, to take rank 11th August, 1829.

First Lieut. Wm. Wells, 2d Regiment of Artillery, to take rank 28th August, 1829.

Bvt. Captain James D. Graham, Assistant Top. Engineer, to take rank 8th Sept., 1829.

First Lieut. John R. Vinton, 3d Regiment of Artillery, to take rank 30th Sept., 1829.

First Lieut. Richard B. Lee, 3d Regiment of Artillery, to take rank 31st Oct., 1829.

Captain John Clitz, 2d Regiment of Infantry, to take rank 31st Dec., 1829.

Captain S. Shannon, 1st Regiment of Infantry, to take rank 23d Feb., 1830.

Captain John Symington, of Ordnance, to take rank 17th May, 1830.

Captain J. M. Washington, 4th Regiment of Artillery, to take rank 23d May, 1830.

Captain Andrew Talcott, Corps of Engineers, to take rank 1st October, 1830.

Captain H. H. Loring, 3d Regiment of Infantry, to take rank 17th October, 1830.

Captain E. K. Barnum, 2d Regiment of Infantry, to take rank 31st December, 1830.

First Lieut. Samuel Cooper, 4th Regiment of Artillery, to take rank 6th July, 1831.

First Lieut. Harvey Brown, 4th Regiment of Artillery, to take rank 23d Aug., 1831.

First Lieut. Saml. Ringgold, 3d Regiment of Artillery, to take rank 8th May, 1832.

First Lieut. Charles Ward, 4th Regiment of Artillery, to take rank 20th July, 1832.

First Lieut. John Bradley, 2d Regiment of Infantry, to take rank 2d October, 1832.

First Lieut. W. S. Newton, 3d Regiment of Artillery, to take rank 31st Dec., 1832.

First Lieut. H. A. Thompson, 4th Regiment of Artillery, to take rank 31st Dec., 1832,

Captain Giles Porter, 1st Reg't of Artillery, to take rank 1st February, 1833.

First Lieut. A. W. Thornton, 4th Reg't of Infantry, to take rank 25th April, 1833.

Captain Joshua Howard, 1st Reg't Artillery, to take rank 1st Nov., 1833.

First Lieut. David Van Ness, 1st Reg't of Artillery, to take rank 4th Nov., 1833.

First Lieut. Justin Dimick, 1st Regiment of Artillery, to take rank 1st May, 1834.

First Lieutenant, C. A. Ogden, to take rank 30th June, 1834.

First Lieutenants by Brevet.

First Lieut. Wm. C. De Hart, 2d Reg't of Artillery, to take rank 1st July, 1830.

First Lieut. James A. Chambers, 2d Reg't of Artillery, to take rank 1st July, 1830.

First Lieut. Julius A. de Lagnel, 2d Reg't of Artillery, to take rank 1st July, 1831.

II—Appointments.

STAFF.

John S. Lytle, Ohio, to be Paymaster, 27th February, 1834.

John B. Wells, Maryland, to be Assistant Surgeon, 1st February, 1834.

John M. Cuyler, Georgia, to be Assistant Surgeon, 1st April, 1834.

Madison Mills, New York, to be Assistant Surgeon, 1st April.

William Hammond, Maryland, to be Assistant Surgeon, 1st June, 1834.

Topographical Engineers.

Brevet Captain William G. M'Neil, Assistant Topographical Engineer, to be Topographical Engineer, with the brevet rank of Major, to rank from the 28th January, 1834, vice Perrault, deceased.

First Lieutenant William G. Williams, late of the 7th Regiment of Infantry, to be Assistant Topographical Engineer, with the brevet rank of Captain, to rank from the 28th of January, 1834, vice M'Neil, promoted.

Military Academy.

Robert W. Weir, New York, to be Teacher of Drawing at the Military Academy, 7th May, 1834.

Regiment of Dragoons.

Second Lieutenant Isaac P. Simonton, of the 2d Resiment of Infantry, to be First Lieutenant of Dragoons, 4th March, 1833, vice Moore, of the 7th Intry, declined.

Second Lieutenant Albert M. Lea, of the 7th Regiment of Infantry, to be 2d Lieut. of Dragoons, 4th March, 1833, vice Holmes of the 7th Infantry, declined.

3. The following named Cadets, constituting the First Class of 1834, having been adjudged by the Academic Staff at the June examination, competent to perform duty in the Army, the President of the United States has attached them as supernumerary Second Lieutenants, by brevet, to Regiments and Corps respectively, as candidates for commissions therein.

Corps of Engineers.

RANK.

1. Cadet Wm. Smith, of New York, to be brevet Second Lieutenant, 1st July, 1834

2. Cadet John Sanders, of Florida, to be brevet Second Lieutenant, 1st July, 1834.

Regiment of Dragoons.

21. Cadet Henry S. Turner, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

First Regiment of Artillery.

4. Cadet Thos. A. Morris, of Indiana, to be brevet Second Lieutenant, 1st luly, 1834.

5. Cadet Robert Allen, of Maryland, to be brevet Second Lieutenant, 1st July, 1834.

7, Cadet Epaphras Kibby, of Ohio, to be brevet Second Lieutenant, 1st July, 1834.

8. Cadet John F. Lee, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

12. Cadet C. B. Chalmers, of D. Columbia, to be brevet Second Lieutenant, 1st July, 1834.

16. Cadet L. A. B. Walbach, of United States, to be brevet Second Lieutenant, 1st July, 1834.

Second Regiment of Artillery.

3. Cadet Harrison Loughborough, of Kentucky, to be brevet Second Lieutenant, 1st July, 1834.

6. Cadet James Duncan, of New York, to be brevet Second Lieutenant, 1st July, 1934.

8. Cadet Wm. T. Stockton, of Pennsylvania, to be brevet Second Lieutenant, 1st July, 1834.

11. Cadet Curran Pope, of Kentucky, to be brevet Second Lieutenant, 1st July, 1834.

13. Cadet John E. Henderson, of Tennessee, to be brevet Second Lieutenant, 1st July, 1834.

Third Regiment of Artillery,

10. Cadet Charles A. Fuller, of Massachusetts, to be brevet Second Lieutenant, 1st July, 1834.

14. Cadet Morris S. Miller, of New York, to be brevet Second Lieutenant, 1st July, 1834.

Fourth Regiment of Artillery.

15. Cadet Wm .G. Freeman, of Virginia, to be brevet Second Lieutenant, 1st July, 1834.

First Regiment of Infantry.

35. Cadet Wm. H. Price, of Pennsylvania, to be brevet Second Lieut. 1st July, 1834.

Second Regiment of Infantry.

30. Cadet Richard S. Smith, of Penn. to be brevet Second Lieut. 1st July, 1834.

Third Regiment of Infantry.

17. Cadet James F. Cooper, of Penn. to be brevet Second Lieut. 1st July, 1834.

19. Cadet George P. Field, of New York, to be brevet Second Lieut. 1st July, 1834.

20. Cadet Cary H. Fry, of Kentucky, to be brevet Second Lieut. 1st July, 1834.

23. Cadet Thomas O. Barnwell, of S. Carolina, to be brevet Second Lieut. 1st July, 1834.

26. Cadet Joseph L. Coburn, of Vermont, to be brevet Second Lieut. 1st July, 1834.

28. Cadet Philip N. Barbour, of Kentucky, to be brevet Second Lieut. 1st July, 1834.

Fourth Regiment of Infantry.

31. Cadet Eustace Robinson, of Virginia, to be brevet Second Lieut, 1st July, 1834.

34. Cadet John Graham, of New York, to be brevet Second Lieut. 1st July, 1834.

Fifth Regiment of Infantry.

25. Cadet Goode Bryan, of Georgia, to be brevet Second Lieut. 1st July, 1834.

Sixth Regiment of Infantry.

32. Cadet Wm. S. Ketchum, of U. States, to be brevet Second Lieut. 1st July, 1834.

Seventh Regiment of Infantry.

18. Cadet Gabriel R. Paul, of Missouri, to be brevet Second Lieut. 1st July, 1834.

22. Cadet Seneca G. Simmons, of Vermont, to be brevet Second Lieut. 1st July, 1834.

24. Cadet Henry McKavett, of New York, to be brevet Secoud Lieut. 1st July, 1834.

27. Cadet James G. Reed, of Pennsylvania, to be brevet Second Lieut. 1st July, 1834.

29. Cadet Arnold Harris, of New York, to be brevet Second Lieut. 1st July, 1834.

33. Cadet Forbes Britton, of Virginia, to be brevet Second Lieut. 1st July, 1834.

36. Cadet Alex. Montgomery, of Penn. to be brevet Second Lieut. 1st July, 1834.

III.—Casualties.

Resignations.—First Lieutenants.

Daniel Tyler, 1st Artillery, 31st May, 1834.

John Archer, 3d Infantry, 31st March, 1834.

Second Lieutenants.

James Clyman, Dragoon, 31st May, 1834.

Thomas J. McKean, 4th Infantry, 31st March, 1834.

Albert S. Johnston, 6th Infantry, 31st March, 1834.

Henry Du Pont, (brevet) 4th Artillery, 15th June, 1834.

Asher Philips, 17th January, 1834—Pay Master.

Lucius Abbott, 31st March, 1834—Assistant Surgeon.

Richard Wayne, 31st January, 1834, do. do.

Charles W. Handy, 31st May, 1834, do. do.

C. R. Leslie, 15th April, 1834, Teacher of Drawing, M. A.

Declined.

First Lieutenant Stephen W. Moore, of the Regiment of Dragoons.

Second Lieutenant Theoph. H. Holmes, of the Regiment of Dragoons.

Deaths.

Brevet Major P. H. Perrault, Topographical Engineer, 28th January, 1834.

Captain Matthew A. Patriek, 1st Artillery, 6th March, 1834.

First Lieutenant Abraham C. Fowler, 2d Artillery, 30th April, 1834.

Second Lieutenant William Bradford, Dragoons, 17th March, 1834.

Second Lieutenant Samuel K. Cobbs, 3d Infantry, 11th January, 1834.

Second Lieutenant Joseph Ritner, 4th Infantry, 18th February, 1834.

Dropped.

Captain B. L. E. Bonneville, 7th Infantry, 31st May, 1834.

4. The officers *promoted* and *appointed*, will report accordingly, and join their proper stations and companies without delay; those on detached service, or acting under special orders and instructions, will report by letter to their respective Colonels;

5. The Brevet Second Lieutenants will *join* their respective Regiments, and report in person for duty, agreesbly to Regulations, by the *15th day of October:* and immediately, by letter, to their respective Colonels, who will assign them to companies.

By order of Alexander Macomb,
Major-General Commanding in Chief.
R. Jones, Adj. Gen.

Memoranda.

Army Register.—Correction and alteration of dates.

First Lieut. Timothy Paige, 4th Infantry, to rank from 4th March, 1833, vice Trenor, appointed Captain of Dragoons.

Second Lieutenant Bradford R. Alden, 4th Infantry, to rank from 15th September, 1833, vice Harford resigned.

Second Lieutenant Daniel P. Whiting 7th Infantry, to rank from 15th December, 1833, vice Carter, promoted.

Second Lieutenant Roger S. Dix. 7th Infantry, to rank from 28th January, 1834, vice Kanes, promoted.

In the caption, at page 4, in the place of "Former Commissions," substitute the words—*Brevets and former Commissions.* Roger Jones.
Adjutant General.

CAUTION.

☞ GEORGE S. KINSMAN was, in October last, entrusted with the accounts due for this paper and for the Railroad Journal in the States *south* and *west* of Pennsylvania. He made collections at various places on his way to New Orleans, as we have since learned from subscribers, of which he has made no returns, and the subscribers have not, therefore, credit on our books for the amount. As nothing has been heard from *Kinsman* since last winter, on his arrival in New Orleans, it is feared that some accident may have befallen him, and his papers have fallen into other hands. This is to caution subscribers not to pay to *him*, or to any person in his name, accounts due this office after this date, and to request any person who may know his present residence, or any thing of him within the last four or five months, to communicate the same to the subscriber without delay. *New York, July 21st*, 1834.

D. K. MINOR.

☞ Messrs. E. & B. G. EASTON, of Cincinnati, Ohio, are authorized to collect the accounts due for the New York American, the Railroad Journal, and Mechanics' Magazine, in Ohio, Kentucky, Tennessee and Indiana.

PUBLIC DOCUMENTS, SPEECHES, PROCEEDINGS AND REPORTS OF THE LAST SESSION OF CONGRESS. This day published and for sale at 35 Wall street—This book contains the MESSAGES and PROTESTS of the President, *Reports* of the Heads of Departments, with the most important Speeches and Proceedings of the Session, including the lengthy Debates upon the DEPOSITE QUESTION, the PROTEST and the POST-OFFICE REPORT. It contains 830 large octavo pages.

A small edition only printed. jy21 tf

SURVEYORS' INSTRUMENTS.

☞ Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

J31 6t

NOTICE TO MANUFACTURERS.

☞ SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty 6d nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for shins. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant machines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lansingburgh.—August 15, 1833. A29 tf RM&F

PATENT RAILROAD, SHIP AND BOAT SPIKES.

☞ The Troy Iron and Nail Factory keep constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years successful operation and now almost universal use in the United States (as well as England, where the subscriber obtained a Patent,) are found superior to any ever offered in market.

Railroad Companies may be supplied with Spikes having countersink heads suitable to the holes in iron rails, to any amount and on short notice. Almost all the Railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

☞ All orders directed to the Agent, Troy, N. Y., will be punctually attended to.

HENRY BURDEN, Agent.

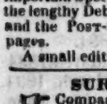
Troy, N. Y. July, 1831.

☞ Spikes are kept for sale, at factory prices, by I. & J. Townsend, Albany, and the principal Iron Merchants in Albany and Troy; J. I. Brower, 222 Water street, New-York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

P. S.—Railroad Companies would do well to forward their orders as early as practical, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand for his Spikes.

J23 1am H. BURDEN.

ALBANY SEED-STORE AND HORTICULTURAL REPOSITORY.



The subscriber having resumed the charge of the above establishment, is now enabled to furnish traders and others with FRESH GARDEN SEEDS, upon very favorable terms, and of the growth of 1833, *warranted* of the best quality.

The greatest care and attention has been bestowed upon the growing and saving of Seeds, and none will be sold at this establishment excepting those raised expressly for it, and by experienced seedsmen; and those kinds imported which cannot be raised to perfection in this country; these are from the best houses in Europe, and may be relied upon as genuine.

It is earnestly requested whenever there are any failures hereafter, they should be represented to the subscriber; not that it is possible to obviate unfavorable seasons and circumstances, but that satisfaction may be rendered and perfection approximated.

ALSO—French Lucern, White Dutch Clover, White Mulberry Seed, genuine Mangel Wurtzel, Yellow Locust, Ruta Baga, and Field Turnip Seeds, well worth the attention of *Farmers*.

W. THORBURN,
347 N. Market st. (opposite Post Office.

☞ Catalogues may be had at the Store; if sent for by mail, will be forwarded gratis. Orders solicited early, as the better justice can be done in the execution.

*** Mr. Thorburn is also Agent for the following publications, to wit:—

NEW YORK FARMER and American Gardener's Magazine.

MECHANICS' MAGAZINE and Register of Inventions & Improvements.

AMERICAN RAILROAD JOURNAL and Advocate of Internal Improvements; and the

NEW-YORK AMERICAN, *Daily, Tri-Weekly*, and *Semi-Weekly; either* or *all* of which may be seen and obtained by those who wish them by calling at 347 *North Market street, Albany*.

LOCOMOTIVE ENGINES.

☞ THE AMERICAN STEAM CARRIAGECOMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1-2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,
WILLIAM NORRIS, Secretary.

December 2d, 1833.

Fr further information on this subject see No. 49, page 772, Vol. 2, of Railroad Journal.

RAILWAY IRON.

☞ Ninety-five tons of 1 inch by ¼ inch, 200 do. 1¼ do. ¼ do., 40 do. 1½ do. ¼ do., 800 do. 2 do. ¼ do., 800 do. 2¼ do. ¼ do., soon expected. *Flat Bars* in lengths of 14 to 18 feet counter sunk holes, ends cut at an angle of 45 degrees with splicing plates, nails to suit.

250 do. of Edge Rails of 36 lbs. per yard, with the requisite chairs, keys and pins.

Wrought Iron Rims of 30, 33, and 36 inches diameter for Wheels of Railway Cars, and of 60 inches diameter for Locomotive wheels.

Axles of 2⅛, 2⅜, 2⅞, 3, 3⅛, 3¼, and 3½ inches diameter for Rail wayCars and Locomotives of patent iron.

The above will be sold free of duty, to State Governments and Incorporated Governments, and the Drawback taken in part payment.

A. & G. RALSTON.
9 South Front street, Philadelphia.

Models and samples of all the different kinds of Rails, Chairs, Pins, Wedges, Spikes, and Splicing Plates, in use, both in this country and Great Britain, will be exhibited to those disposed to examine them. d71meowr

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ENGINEERING AND SURVEYING INSTRUMENTS.

☞ The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely *new*: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely any thing to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,
JAMES P. STABLER, Superintendant of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors. E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad., Germant. and Norrist. Railroad

m1 1y

STEPHENSON,

Builder of a superior style of Passenger Cars for Railroads

No. 264 Elizabeth street, near Bleecker street, New-York.

☞ RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlæm Railroad, now in operation.

J 25 tf

RAILROAD CAR WHEELS, BOXES AND AND OTHER RAILROAD CASTINGS.

☞ Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly attended to. Also, CAR SPRINGS.

Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,

Near Dry Dock, New-York.

☞ THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boilers, which are warranted, for safety and economy, to be superior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on reasonable terms. A share of public patronage is respectfully solicited. m18

INSTRUMENTS.

SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

☞ EWIN & HEARTTE, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Baltimore, beg leave to inform their friends and the public, especially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewin & Heartte.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Railroad Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern cities are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit levels, and Surveyor's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accuracy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1833

To Messrs Ewin and Heartte—As you have asked me to give my opinion of the merits of those instruments of your manufacture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming aquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by myself, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprize so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Railroad Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perusing the same. m24